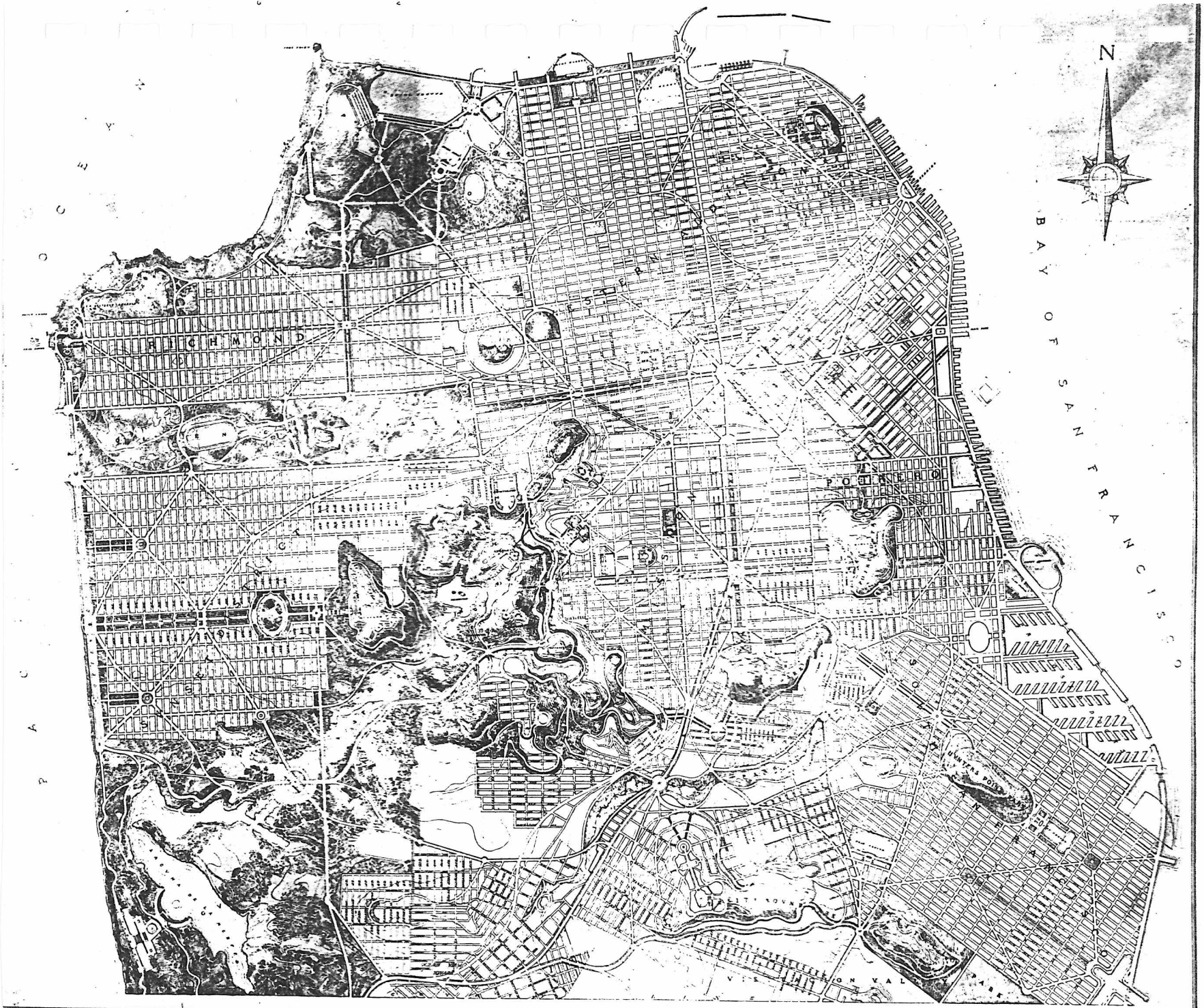
MAJOR STREETS
SAN FRANCISCO

Report to the SAN FRANCISCO
TRAFFIC SURVEY COMMITTEE
1 9 2 8

Mr. F. Dohrmann, Jr.

BARTHOLOMEW & ASSOCIATES
SAINT LOUIS MISSOURI

GOLDEN GATE
N
BAY OF SAN FRANCISCO
RICHMOND
UNIV. OF CALIFORNIA


N
PACIFIC OCEAN
BAY OF SAN FRANCISCO
RICHMOND
PRESIDIO
GOLDEN GATE PARK
POLK
LARKIN
VAN NESS
FILLMORE
DIVISION
POTRERO
HUNTERS POINT
SAN FRANCIS
UNIV. OF CALIFORNIA

SAN FRANCISCO
CALIFORNIA

SAN FRANCISCO TRAFFIC SURVEY COMMITTEE

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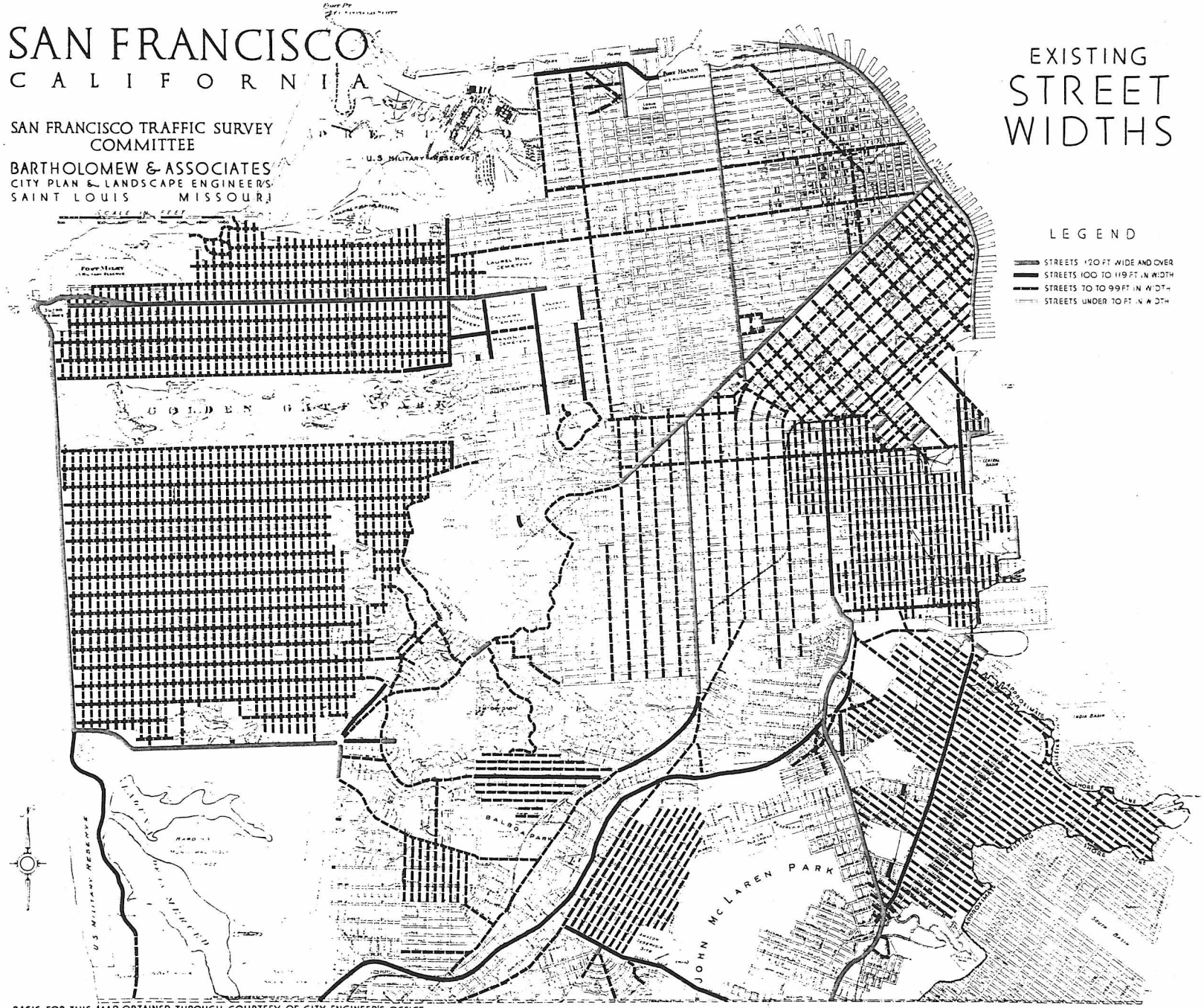
CITY PLAN & LANDSCAPE ENGINEERS
SAINT LOUIS MISSOURI

EXISTING STREET WIDTHS



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AUG. 1938

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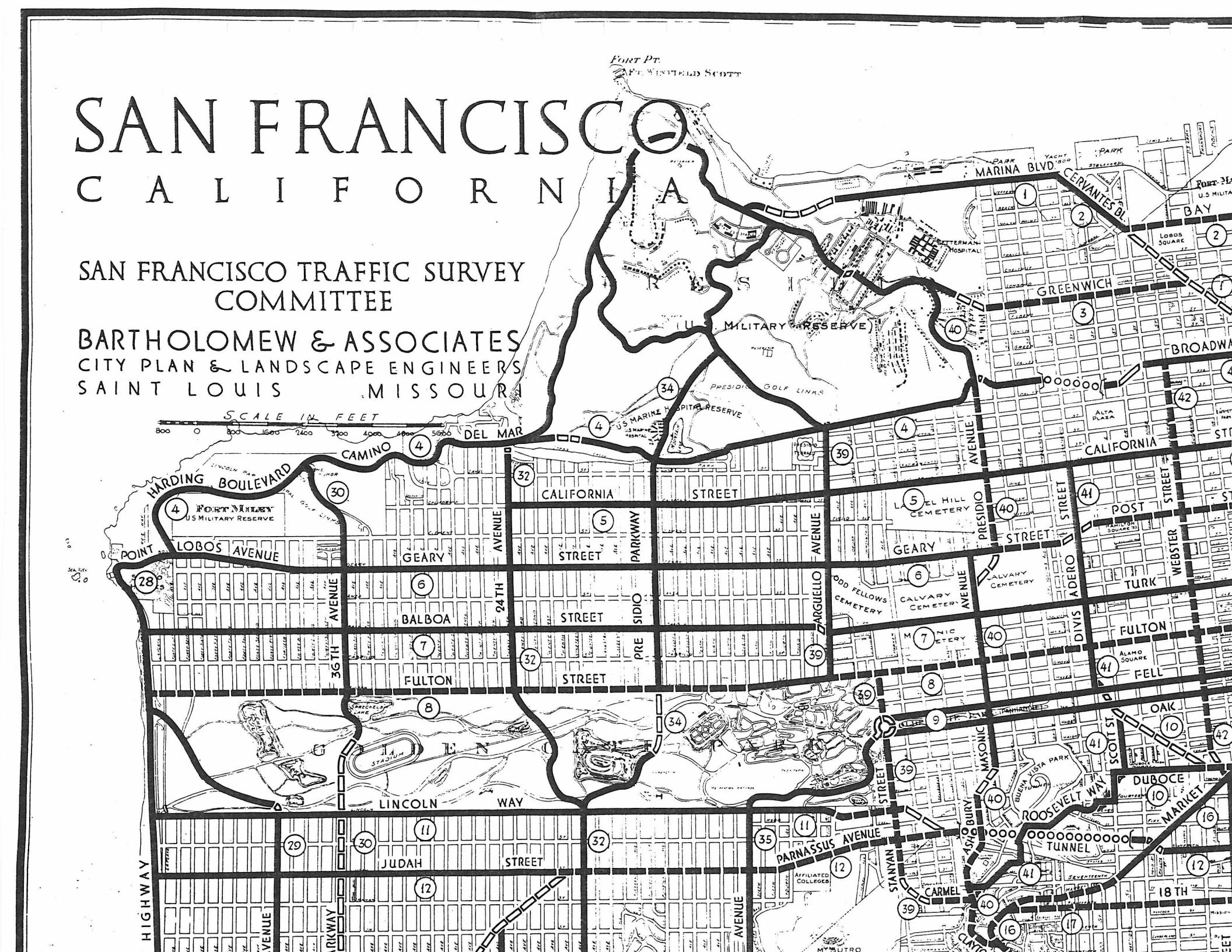
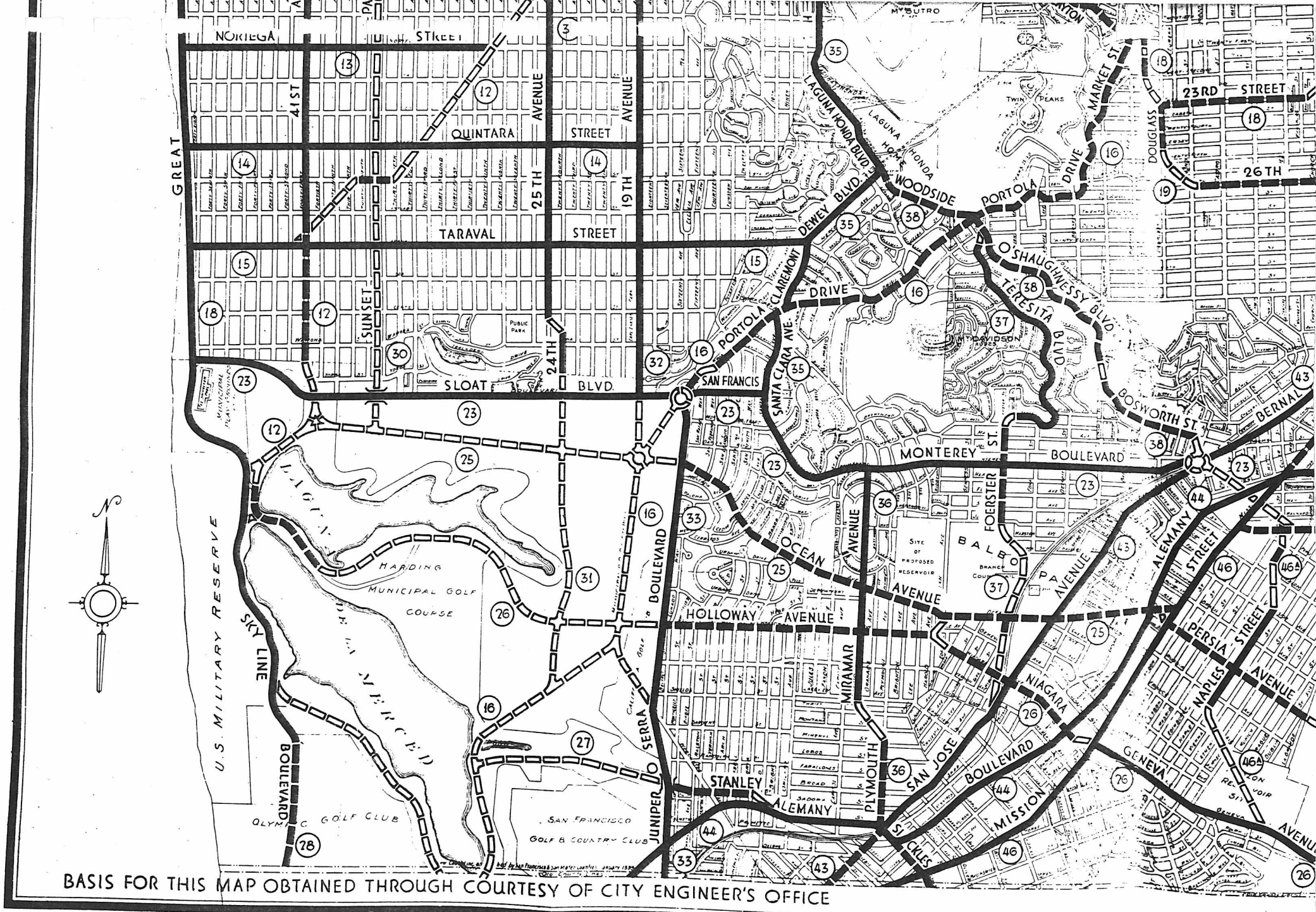


A SYSTEM OF MAJOR STREETS

LEGEND

- STREETS SUFFICIENTLY WIDE
- STREETS TO BE WIDENED
- NEW STREETS OR CONNECTIONS
- PROPOSED TUNNELS
- PROPOSED BAY BRIDGE
- (12) ROUTE NUMBERS



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18TH STREET
22ND STREET
23RD STREET
26TH STREET
ARMY STREET
MARKET ST.
DOUGLASS
DOLORES
VALENCIA
MISSION ST.
HOWARD
FOLSOM STREET
BRYANT
POTRERO AVENUE
PENNSYLVANIA AVE.
IOWA ST.
THIRD STREET
ILLINOIS STREET
CLAYTON
DRIVE
GHNESSY BLVD
TA BLVD
BOSWORTH ST.
BERNAL CUT
HOLLY PARK
CRESCENT AVENUE
BOULEVARD
SILVER AVENUE
ALEMANY STREET
PP AVENUE
AGARA
PERSIA STREET
NAPLES AVENUE
GENEVA AVENUE
JOHN M LAREN PARK
LICK OLD LADIES HOME
ERVOIR
UNIVERSITY
WOOLSEY ST.
RAYMOND AVENUE
SAN BRUNO AVENUE
MISSION ST. TUNNEL
BARNEVELD AVE.
TOLAND ST.
OAKDALE AVENUE
QUINT STREET
EVANS
ARTHUR AVENUE
INDIA BASIN
INDIA ST.
PALOU
WILLIAMS AVE.
BAY SHORE HIGHWAY
PAUL AVE
YOSEMITE
GILMAN
THIRD
SOUTH BASIN
BAY SHORE AVE.
RICHTER
BAY VIEW PARK
HUNTERS POINT
New County Line

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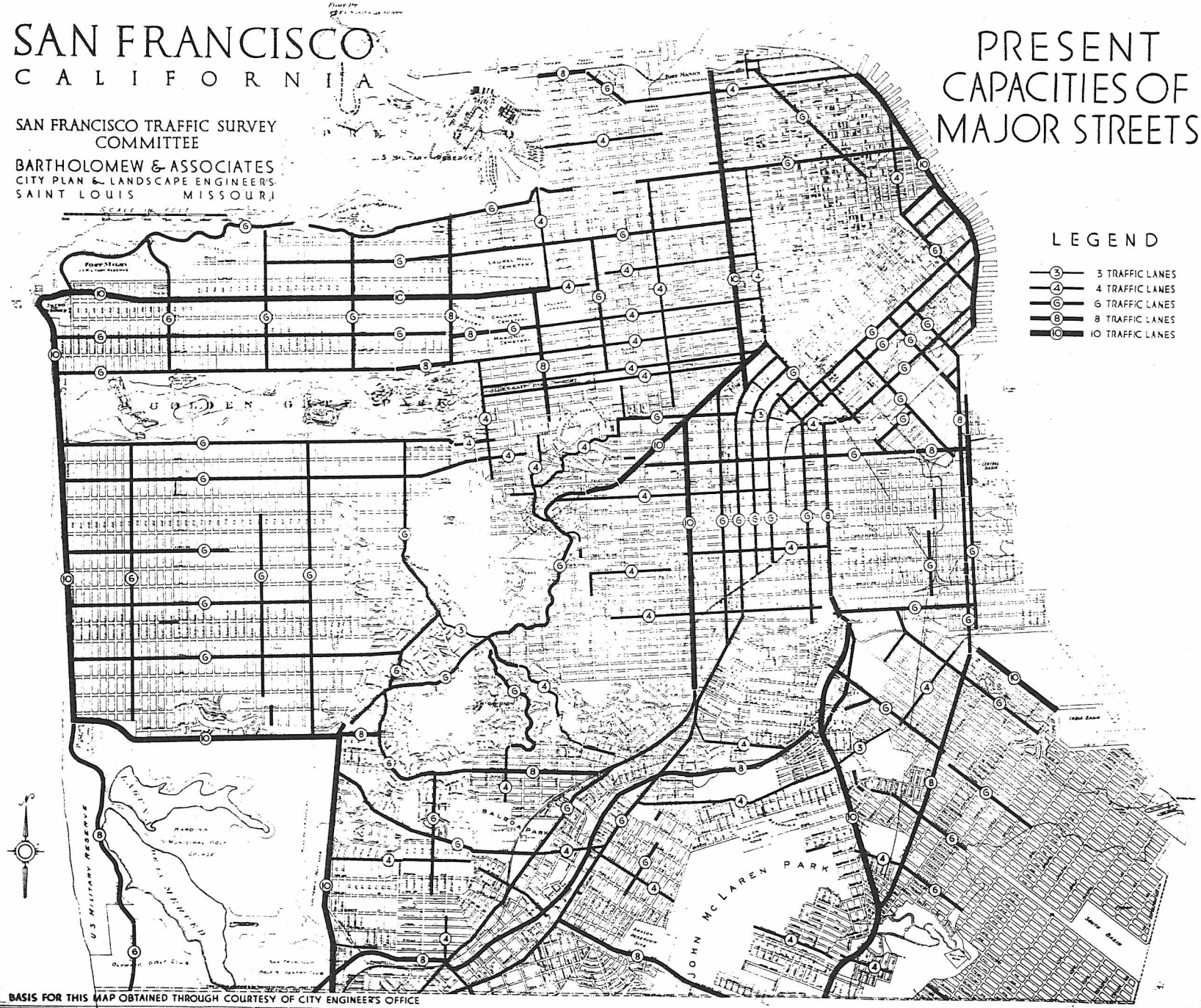
PRESENT CAPACITIES OF MAJOR STREETS



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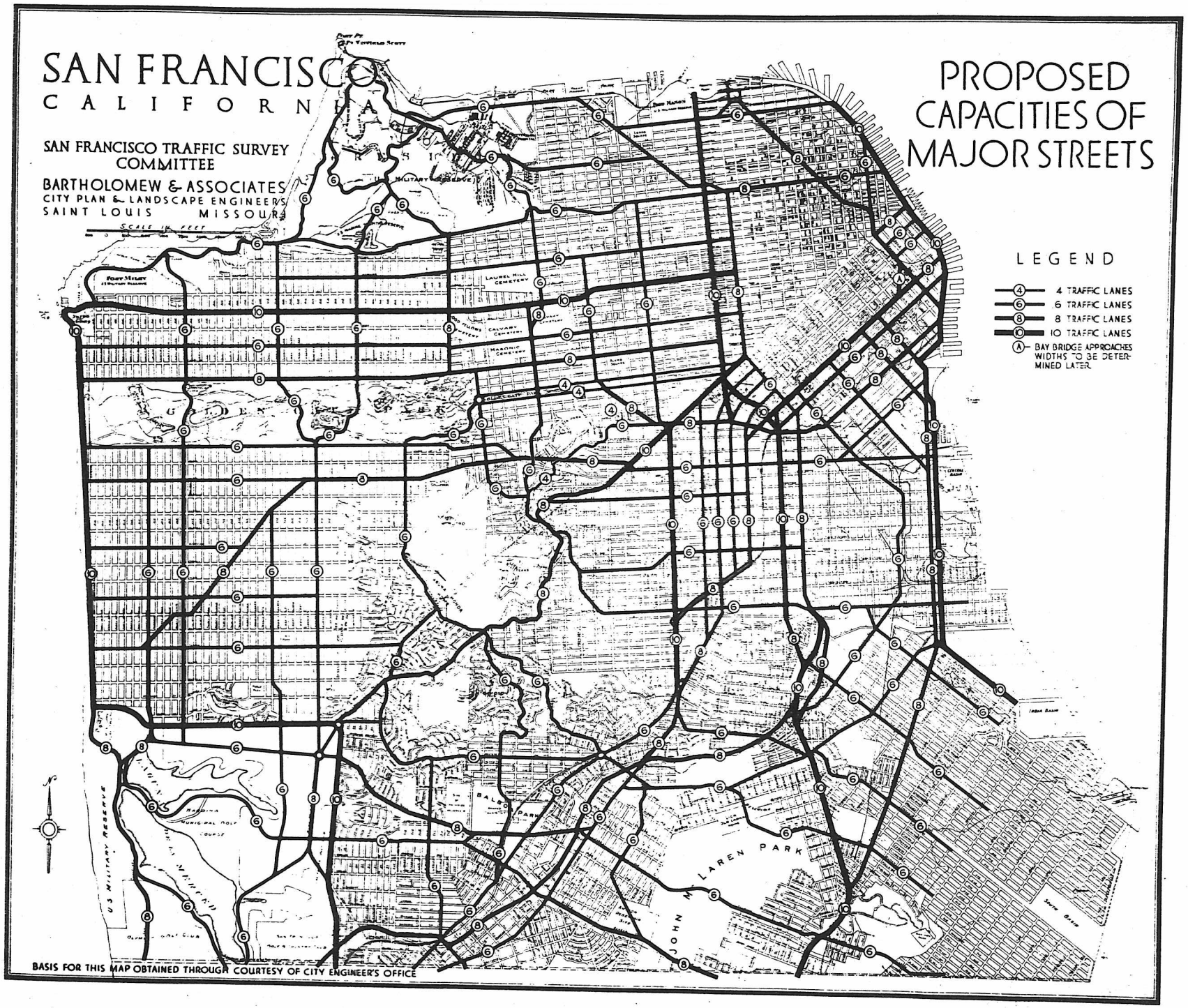
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CALIFORNIA
SAN FRANCISCO TRAFFIC SURVEY COMMITTEE
BARTHOLOMEW & ASSOCIATES
CITY PLAN & LANDSCAPE ENGINEERS
SAINT LOUIS MISSOURI
SCALE IN FEET
PROPOSED CAPACITIES OF MAJOR STREETS
LEGEND
4 TRAFFIC LANES
6 TRAFFIC LANES
8 TRAFFIC LANES
10 TRAFFIC LANES
A- BAY BRIDGE APPROACHES WIDTHS TO BE DETERMINED LATER
GOLDEN GATE PARK
JOHN McLAREN PARK
U.S. MILITARY RESERVE
BASIS FOR THIS MAP OBTAINED THROUGH COURTESY OF CITY ENGINEER'S OFFICE

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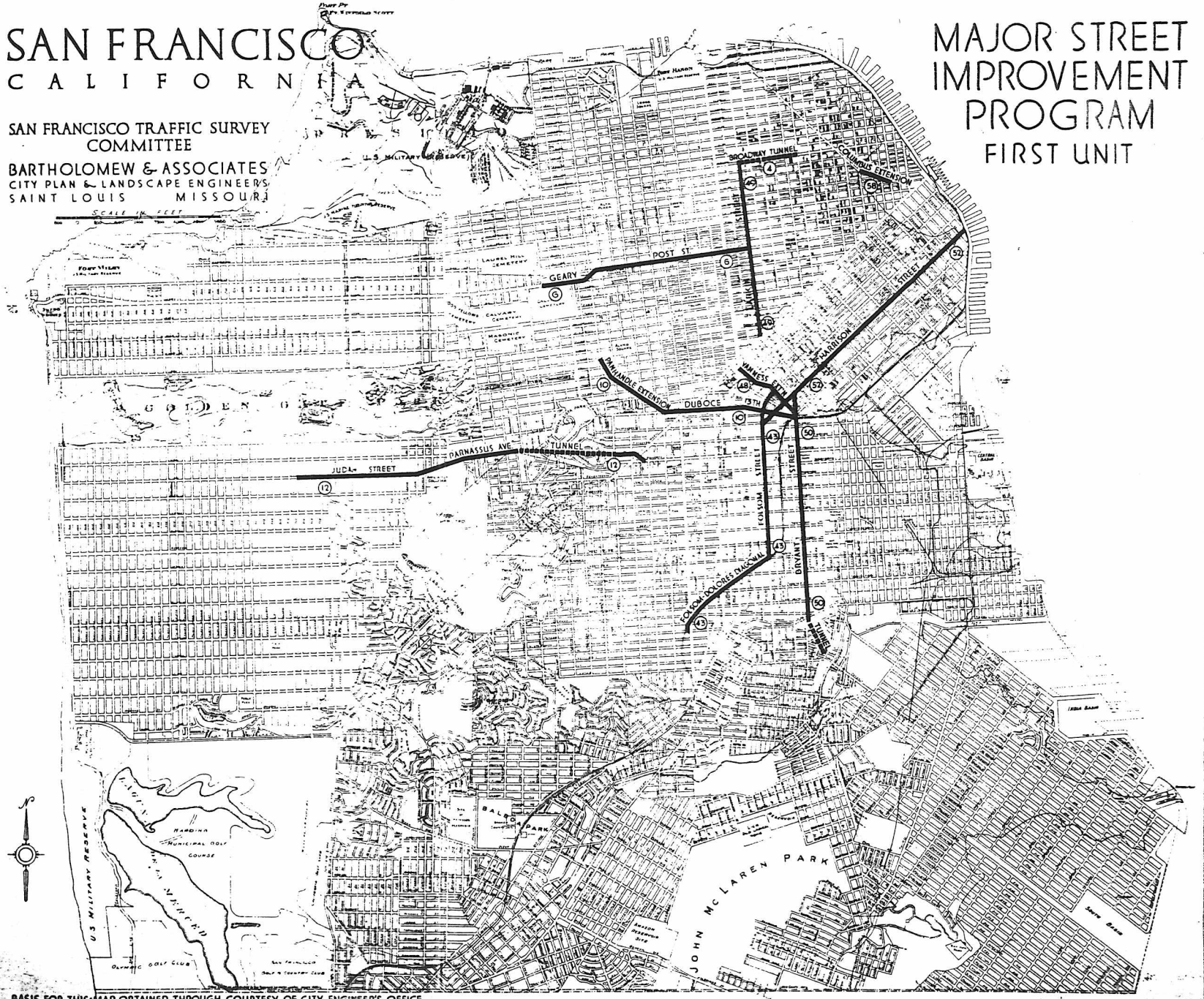
MAJOR STREET IMPROVEMENT PROGRAM
FIRST UNIT



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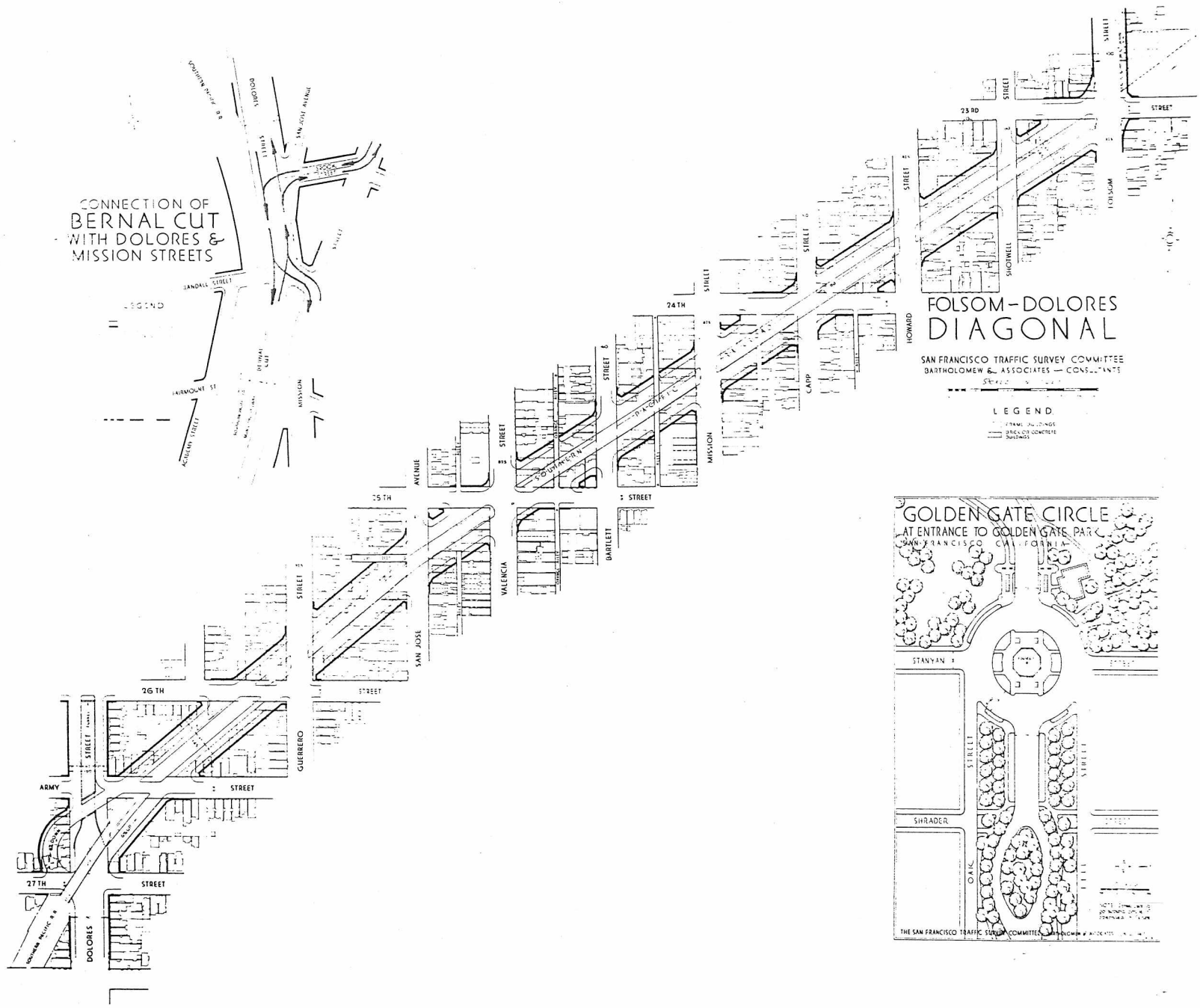

CONNECTION OF
BERNAL CUT
WITH DOLORES &
MISSION STREETS
LEGEND
DOLORES STREET
RANDALL STREET
FAIRMOUNT ST
MISSION
FOLSOM–DOLORES
DIAGONAL
SAN FRANCISCO TRAFFIC SURVEY COMMITTEE
BARTHOLOMEW & ASSOCIATES — CONSULTANTS
LEGEND
23RD STREET
24TH STREET
25TH STREET
26TH STREET
27TH STREET
ARMY STREET
SHOTWELL
HOWARD
CAPP
MISSION
SAN JOSE AVENUE
VALENCIA
GUERRERO
DOLORES
SOUTHERN PACIFIC
BARTLETT
GOLDEN GATE CIRCLE
AT ENTRANCE TO GOLDEN GATE PARK
SAN FRANCISCO CALIFORNIA
STANYAN
SHRADER
OAK
THE SAN FRANCISCO TRAFFIC SURVEY COMMITTEE

Plate Eighteen-B

DETAILS OF PROPOSED IMPROVEMENTS

Plate Eighteen-A showed detailed plans for two improvements. Three additional plans are shown here, two of them being intersection studies designed to straighten out the traffic confusion at the junction of main streams of travel.

FOLSOM - DOLORES DIAGONAL

North-bound traffic via the Bernal Cut and via Mission Street is offered an excellent route, Dolores Street, leading it to this diagonal. The main volume of traffic will flow on the diagonal to Folsom, thence to the south side of the business district. Folsom will be widened in order to give it additional capacity. The diagonal, however, will also distribute traffic into Valencia, Mission and Howard.

A roadway is shown on either side of the Southern Pacific right-of-way. Although there is but a single track now, ample width is reserved in the center for future double tracked rapid transit in an open cut. Each of the two roadways will have a capacity of four lines in one direction.

CONNECTION OF BERNAL CUT WITH DOLORES AND MISSION STREETS

Unless some such plan as this is adopted for connections between the Bernal Cut and Dolores and Mission Streets, there will be conflict between traffic streams flowing between the various routes.

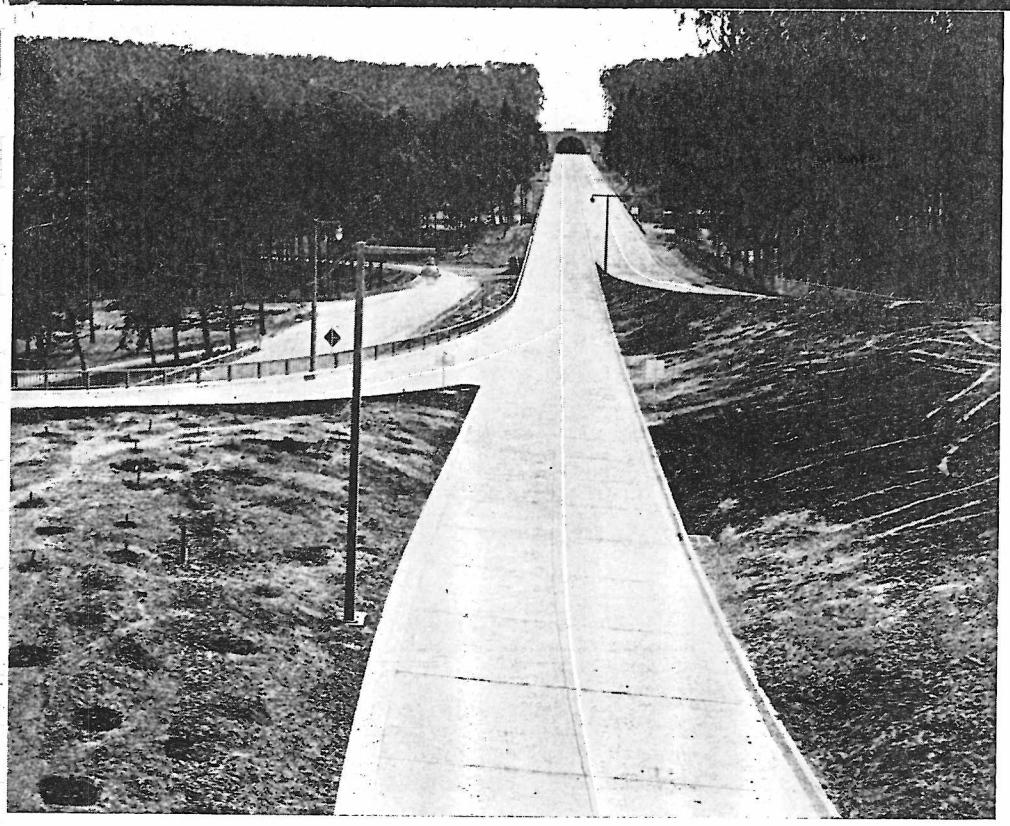
Brock Street is used here for interchange between the Bernal Cut and Mission. Randall Street is used for interchange between Dolores and Mission. By a separation of movements the traffic streams can be readily controlled and confusion avoided.

GOLDEN GATE CIRCLE

The present Panhandle entrance to the Park at Stanyan is conducive to traffic confusion, as the space is wide, and there is no definition of lanes for traffic. The use of Oak and Fell as one-way streets and an increase of travel on them will add to the intersection problem. A traffic circle can be constructed here without taking any private property. This will entirely eliminate traffic confusion.

A circle at the entrance to the park, with proper landscape treatment will have an esthetic appeal of great value to the community.

NAME OF STREET	Present Width in Feet		Pres. Cap'y in Lanes		Prop. Cap'y in Lanes
	Rdwy.	Street	Rdwy.	Str.	
42. WEBSTER - DOLORES					
Webster: Broadway to Hermann	38.75	68.75	4	4	6
Hermann to Market	to be	opened			6
Dolores: Market to Army	54(2)	120	6	10	10
43. FOLSOM - BERNAL - SAN JOSE					
Folsom: 9th to 16th	52.5	82.5	6	6	8
16th to 19th	58.5	82.5	6	6	8
19th to 23rd	52.5	82.5	6	6	8
Diagonal: Folsom to Dolores	to be	opened			8
Dolores: Army to Bernal Cut	27+27	120	6	10	10
Bernal Cut: Dolores to San Jose	42 + 2 car tracks	117.5	6	6	6
San Jose: Bernal Cut to Sickles	60	80	6	6	6
Sickles to County Line	40	60	4	4	6
44. ALEMANY BOULEVARD					
San Bruno to County Line	80	100	8	8	8
45. VALENCIA					
Market to Mission	52.5	82.5	6	6	6
46. MISSION					
9th to Folsom Diagonal (S.P.RR.)	52.5	82.5	6	6	6
Folsom Diagonal to Army	52.5	82.5	6	6	6
Army to Alemany	58.5	82.5	6	6	6
Alemany to County Line	58.5	82.5	6	6	6
46-A NAPLES					
Craut: Silver to Madrid	to be	opened			6
Madrid: Craut to Avalon	40	70	4	6	6
Diagonal: Madrid to Naples	to be	opened			6
Naples: Diagonal to Russia	40	70	4	6	6
Diagonal: Russia to Geneva	to be	opened			6
47. HOWARD					
9th to Folsom Diagonal	58.5	82.5	6	6	6



Funston Avenue Approach, tunnel in distance, before being opened to traffic.

Colorful Dedication Scenes

WITH brilliance and color, international in flavor, the new Funston and Nineteenth Avenue Approaches to the Golden Gate Bridge were formally dedicated and officially opened to traffic Sunday, April 21. Thousands of people participated in the day's events, many of them arriving in spectacular Cavalcade formations from various parts of the Pacific Coast, the largest being from the Redwood Empire, Mission Trails and Southern California.

Dominant in the presentations, each of which was brief, were expressions of friendly good-will and the importance of construction of more highways, for the promotion of perpetual peace and for mutual benefit.

The dedication ceremonials were staged by the Mayor's Citizens Committee of San Francisco, headed by Supervisor John M. Ratto, chairman.

Operating plan and script were designed and executed by the Redwood Empire Association, the General Manager and staff of which served in technical and productive capacity, San Francisco being a part of and Southern Gateway to the Redwood Empire.

Importance of the Funston and Nineteenth sectors, in the Pacific Coast International and National Highway Systems was emphasized by the speakers, who complimented those who financed the several units respectively, namely: California Highway Commission and State Department of Public Works; U. S. Public Works Administration; City and County of San Francisco; Works Progress Administration (section through Golden Gate Park); the engineers, contractors and those labor groups actually performing the work.

Motif for the Funston Avenue Dedication Ceremonial, formal in nature, was the promulgation of friendly relations between Canada, Mexico and the United States, and exchange of visitors between these nations and the Pacific Coast States.

"Wedding of Pacific Coast travel interest" was the theme for the Nineteenth Avenue dedication.

Speakers for the Funston Avenue Dedication included: Supervisor

(Continued on page 21)

Funston Avenue To Golden Gate

By LARRY BARRETT, California Highway Co

L. BARRETT

ON MAY 28, 1937, the world's longest bridge span across our Golden Gate was opened to traffic and the watery bonds which had hampered the free flow of communication between San Francisco and the California north coast country were forever broken.

With the dedicating on April 21 of the Funston Avenue Approach to the Golden Gate Bridge, a new and modern freeway through the historic Presidio of San Francisco, we have provided additional facilities for still more unrestricted traffic flow between San Francisco and the Redwood Empire to the north.

This new highway presents direct connection between the Golden Gate Bridge and many of the principal residential sections of San Francisco. It provides the shortest connection with through city arterials to two of the three main highways down the peninsula.

Aside from its purpose as a public traffic utility, the building of this approach to the highway across the Gate represents the success of the American democratic form of government, which is based upon theories of cooperation and compromise. The building of the short two miles of this new freeway is an example of the practical application of these democratic theories.

Six separate public agencies of the American people were involved in construction of the project:

The United States Army, over whose lands the greater portion of the highway was placed;

The City and County of San Francisco, whose citizens were most vitally interested in the added facil-

er-ie Approach Gate Span Open

BARRETT, Chairman,
High , Commission

ity and who allocated a large portion of the city's share of ½-cent gas tax funds for the work;

The Golden Gate Bridge and Highway District, whose directors saw in the new approach a greater bridge service;

The Public Works Administration, which provided funds for nearly one-half the cost of the work;

The California Highway Commission by whose authority State highway funds were allotted to provide the remaining necessary funds;

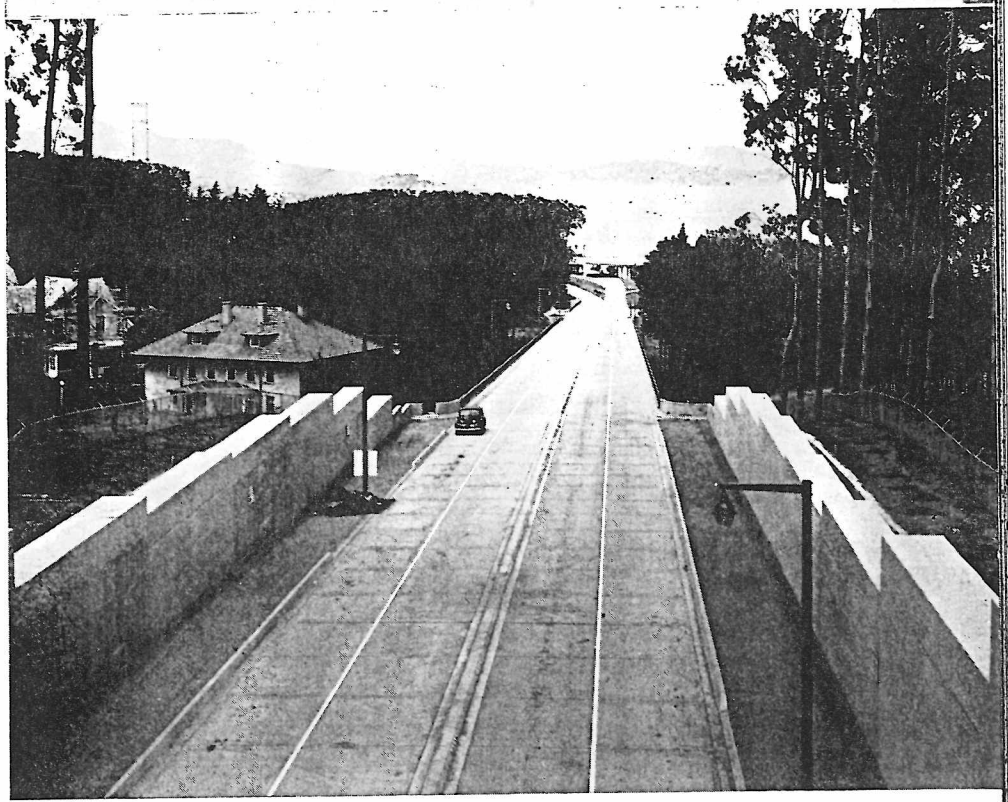
The California Division of Highways whose Engineers designed and supervised construction of the project.

Two years of negotiation by the city, the bridge district, the War Department and the State were required before an agreement was reached that the road should be built by the Division of Highways. During these negotiations many difficulties were met and overcome through cooperation and compromise by the several agencies involved, and on July 27, 1938, the United States War Department issued a permit to the State for construction of the new route across the Presidio.

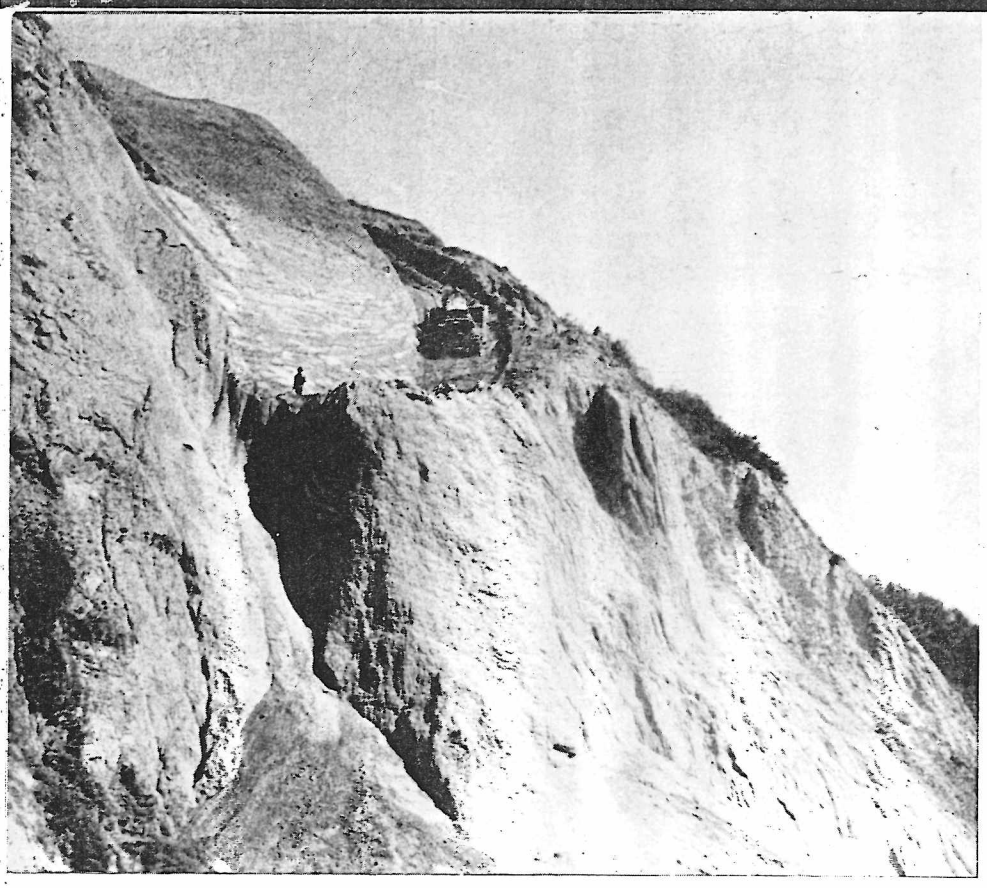
The plans finally adopted met the requirements of the Army in crossing the Presidio Grounds; the city of San Francisco in connecting with arterial street improvements between Golden Gate Park and the Presidio; the Golden Gate Bridge and Highway District in satisfactory connections with its approach viaduct, and the State in the matter of construction standards of the State Highway System.

As I said, the Army permit was issued on July 27, 1938. Seventeen days later, on August 13, the State

(Continued on page 14)



Top—Dedication dignitaries. Left to right—Amerigo Bozzani, Highway Commissioner; Hector M. Escalona, Consul General of Mexico; Director of Public Works Frank W. Clark, J. Gordon Smith, representing British Columbia; Larry Barrett, chairman, and L. G. Hitchcock of Highway Commission. Bottom—New Funston Avenue Approach looking toward Golden Gate Bridge, tower of which is seen in left background.



Clearing summit of Santa Monica Palisades of dangerous slide material

five thousand cubic yards of material should be removed by terracing, all work to be done by a ninety horsepower tractor and bulldozer. After placing a high dike along the centerline of the pavement to prevent material striking any vehicle, a slope was carried down to a single terrace approximately eighty feet above the pavement. To do this necessitated a close approach to a street above, and the bin-type metal cribbing subsequently placed is clearly shown in the picture. This work was rather spectacular since the bulldozer was capable of pushing a large amount of material over and the public displayed considerable interest in watching it.

It is believed that this work, preventative in character, has cost less than a large slide removal, and the traveling public is no longer subjected to the hazard the unstable cliff caused.

Cost to the Maintenance Department for the clearing of slides of the magnitude possible at this particular point more than justifies the expenditure of funds here for slide prevention.

Golden Gate Span Approach is Dedicated

(Continued from page 3)

submitted the project to the federal Public Works Administration and within six days received the acceptance of the project for construction as a PWA docket. A call for bids on the first contract was immediately published by the Division of Highways and within six weeks from acceptance by the PWA, on October 3, 1938, construction operations on the grading contract were begun.

The project as planned and built extends from the intersection of Lake Street and Park-Presidio Boulevard on the south side of the Presidio to a braided connection with the main approach viaduct of the bridge, a net length of approximately 1½ miles. The total length of construction, including the four on and off ramps at the bridge approach, is slightly over two miles.

In consideration of the right of way given by the Army it was necessary that drainage from the roadway should not empty onto Presidio property; that the highway be tunneled under the golf course, and that Presidio roads be carried under the freeway.

These requirements necessitated construction of two master drainage systems, one emptying into Mountain Lake at the south end of the project and the other into the bay at the north end.

The most spectacular construction feature of the project was the tunnel. This structure was built by the cut and cover method, the reinforced concrete tunnel being built in open cut and the ground returned to its original contours by placing a fill over it. The tunnel is 1300 feet in length, built for four lanes of traffic and is provided with a ventilating shaft 24 feet square.

Through the Presidio grounds three reinforced concrete viaducts were constructed as units of the highway. These viaducts carry the freeway over ravines and across Presidio Roads. Viaduct "A," south of the tunnel, crosses West Point Avenue; Viaduct "B," some 500 feet north of the tunnel, is the longest of the three and crosses Kobbe Avenue. This structure provides a striking entrance for Fort Winfield Scott. Viaduct "C" is about 250 feet north of "B" and crosses Storey Street.

The four ramps, which make the connections to the main bridge approach, provide for traffic distribution by means of modern braided design. This braided design is such that no cars, whether leaving or going onto the main approach, can cross the line of opposing traffic.

Throughout its length this new highway provides the best in modern arterial construction, namely, two wide lanes for traffic in each direction, separated by a central dividing strip. In conformance with present arterial safety standards of the Division of Highways, these lanes are eleven and twelve feet in width.

As chairman of the California Highway Commission, which allocates all State highway funds, I have been most interested in the financing of this million dollar project.

While the final total cost of the six

contracts under which the new freeway has been built have not as yet been computed, it is estimated that the entire work will cost approximately $1,169,000. PWA Federal funds and State highway money were used in financing all six contracts and on three of them the city of San Francisco contributed from its share of ½-cent gas tax funds.

Costs of each of the contracts are as follows:

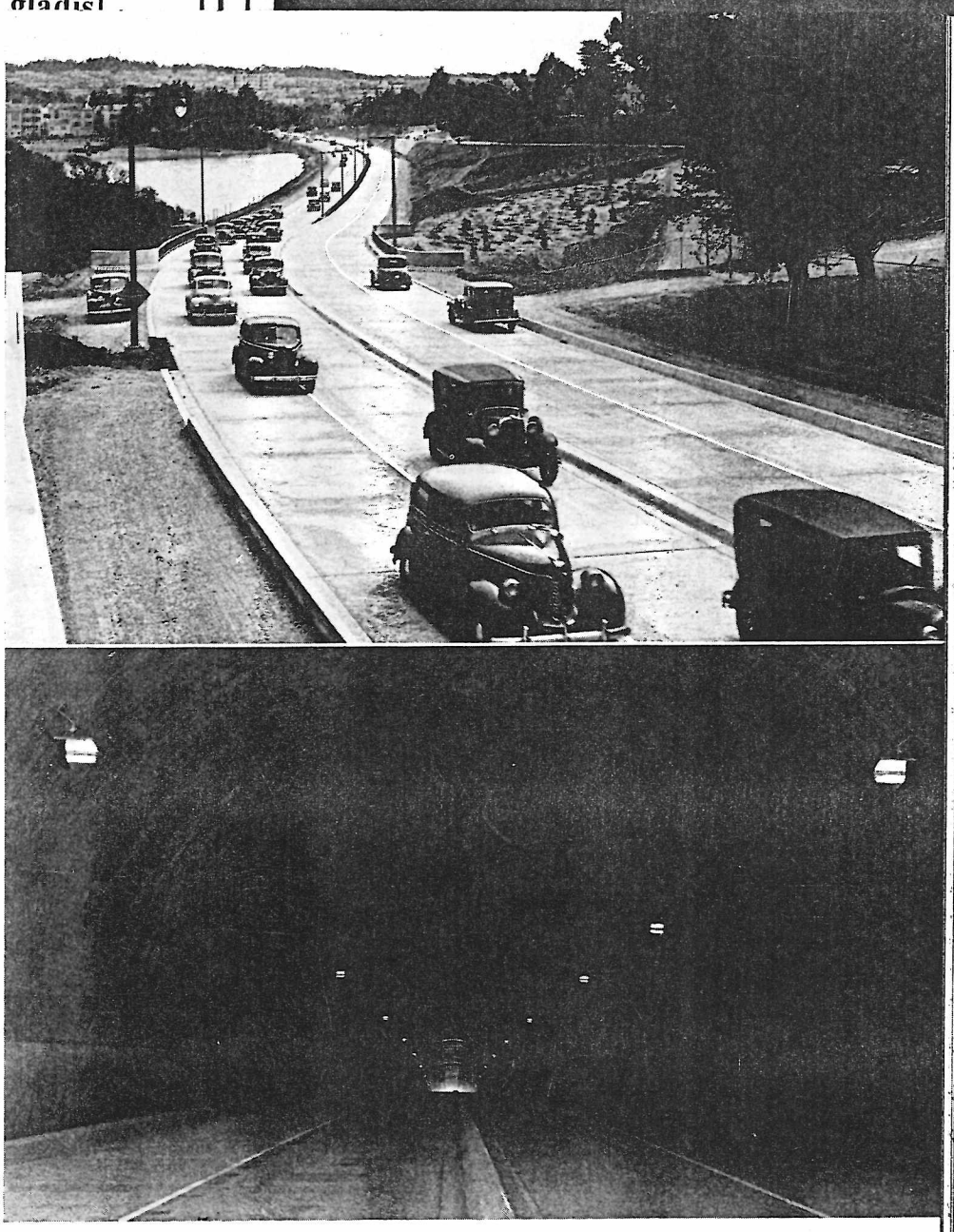
Grading, tunnel and drainage	$580,000
Viaducts A, B, & C	225,000
Viaduct F (Approach Ramp)	55,000
Underpass D, viaduct connection E, and 2 pedestrian undercrossings	97,000
Paving and lighting	172,000
Landscaping	40,000
	$1,169,000

Construction features on the project were numerous. A rough idea of the size of the undertaking may be obtained by looking at a few of the quantities of materials involved.

The entire project involved 508,000 cubic yards of roadway excavation and tunnel backfill and 60,000 cubic yards of structure excavation; 40,000 cubic yards of concrete went into the tunnel, viaducts, structures and pavement; 2500 tons of reinforcing steel was used in the concrete construction; drainage pipes totaled 21,000 lineal feet; and the base for road work required 10,000 tons of rock.

Much credit is due to all who had a hand in planning and constructing the project and on behalf of the California Highway Commission and the Division of Highways may I thank particularly members of the San Francisco Board of Supervisors and the city's engineering staff; Colonel Caples and Major General Simmonds of the United States Army, the directors and engineering staff of the Golden Gate Bridge District and Mr. K. A. Godwin and his associates of the Public Works Administration.

The contractors whose organizations performed the actual construction should also be included among those who contributed to the cooperative efforts in the completion of this highway. Grading, construction of the tunnel and drainage structures were operations performed under contract by the Macco Construction Company. Contracts for construction of four viaducts were awarded by Director of Public Works Frank W. Clark to the Union Paving Company. The underpass and viaduct connections were built under a contract awarded to M. J. Lynch. The paving and lighting contract also was awarded by the Director to the Union Paving Company and landscaping is being done under contract with the Leonard Coates Nurseries.



Upper—Traffic starts over Funston Avenue Approach. Lower—View of tunnel under golf course in U. S. Presidio.

IMPROVED HIGHWAYS IN U. S.

There is a total of 11,070 miles of improved highways exceeding two lane widths in the United States, according to figures compiled by the American Association of State Highway Officials. Only two states, Montana and Wyoming, have no roads exceeding two lane widths. New York leads in three lane widths with 926 miles. Pennsylvania is second with 905 miles. Illinois has 548 miles of four lane highways, and Michigan is second with 394.

California has 74 miles of five lane roads and 49 miles of six lane. Michigan leads the six lane classification with 101 miles, and the eight lane with 22 miles.

"What's your room mate like?"
"Nearly everything I own."

Visitor (at dam site): And did they put the dam down to the bottom of the river?

Engineer: No, madam, they left two inches open so the fish could swim through.

INCLUDING APPENDIX 1, 2 + 3

A REPORT TO THE

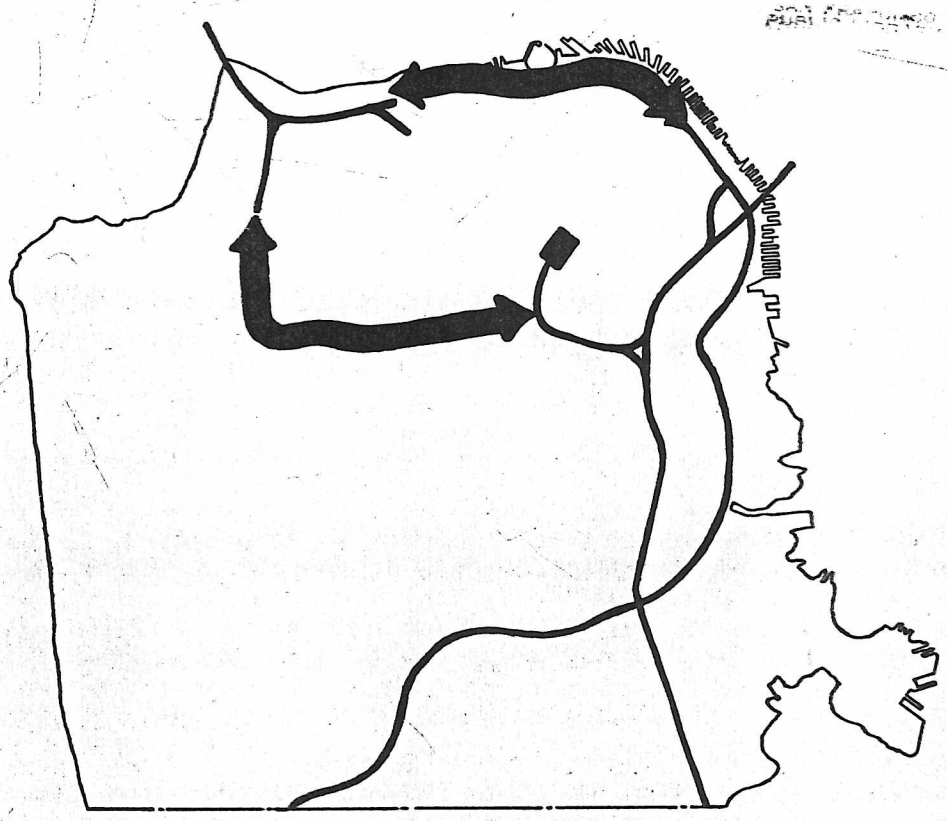
SAN FRANCISCO BOARD OF SUPERVISORS

ON THE

PANHANDLE AND GOLDEN GATE FREEWAYS

DOCUMENTS

FEB 15 1966



A JOINT CITY-STATE STUDY

FEBRUARY 1966

B. RECOMMENDATIONS

The following are the recommendations of the Advisory Committee of the Joint City-State Freeway Study, together with comments detailing the differences between these and former recommendations:

1. Both the Golden Gate Freeway and the Panhandle Freeway should be constructed as soon as practicable. - The difference between this and former recommendations is that each freeway by itself has been recommended in the past but this is the first time both freeways have been recommended for construction at the same time. These two routes together would complete the most important elements of the Trafficways Plan of The Master Plan of San Francisco and would meet our vehicular transportation needs for some time to come. They would be compatible with long range plans for rapid transit facilities to serve the Richmond, Marina and southeastern sectors of the City, not included in the initial BARTD program now under construction.

2. The alignment of the Golden Gate Freeway should follow that shown on the location map following these recommendations. The route is shown in detail in Appendix 4 prepared by the State Division of Highways and identified as Route F between the Marina and Jones Street and as Route F_D between Jones Street and the Embarcadero Freeway. While this route is substantially the same alignment as previously recommended, it has significant changes in design features in order to be compatible with the neighborhoods through which it passes, and to enhance the surrounding areas. The changes are:

a. A significant increase in recreational and park areas.

b. A parkway constructed over the top of the depressed Golden Gate Freeway for a major portion of the route, connecting the Palace of Fine Arts in the west with all the maritime centers to the east.

c. A very careful location of the freeway in elevation, to provide for interesting vistas and outlook for motorists, when possible, but also restraining and controling the visible aspects of the freeway proper from the view of residents.

d. Along the base of Telegraph Hill, the design is particularly conducive to refined development of the north waterfront area and is sufficiently removed from the Embarcadero so as to not interfere with the operations of the Port.

e. The use of air-rights not only for restoration of park lands and the creation of sculptured topography in the vicinity of the freeway, but also for new dwelling units to compensate for those which must be removed for the sake of construction.

3. <u>The alignment of the Panhandle Freeway should follow that shown on the location map following these recommendations.</u> - This route is substantially the same as that previously recommended by the Park and Recreation Commission as a modification of the State's original recommendation.

The essential changes, however, are::

a. Provision for a sculptured land replacement over the

top of the freeway in Park Presidio Boulevard to create an interesting outlook and increase the usefulness of the park areas.

b. Reduction of the design speed from 65 to 50 MPH, thereby reducing the radius of curvature from 1,200 feet to 900 feet and reducing by 80 the number of dwelling units that would be acquired.

c. Provision for additional design features in the Panhandle area to improve the vistas and usefulness of the park.

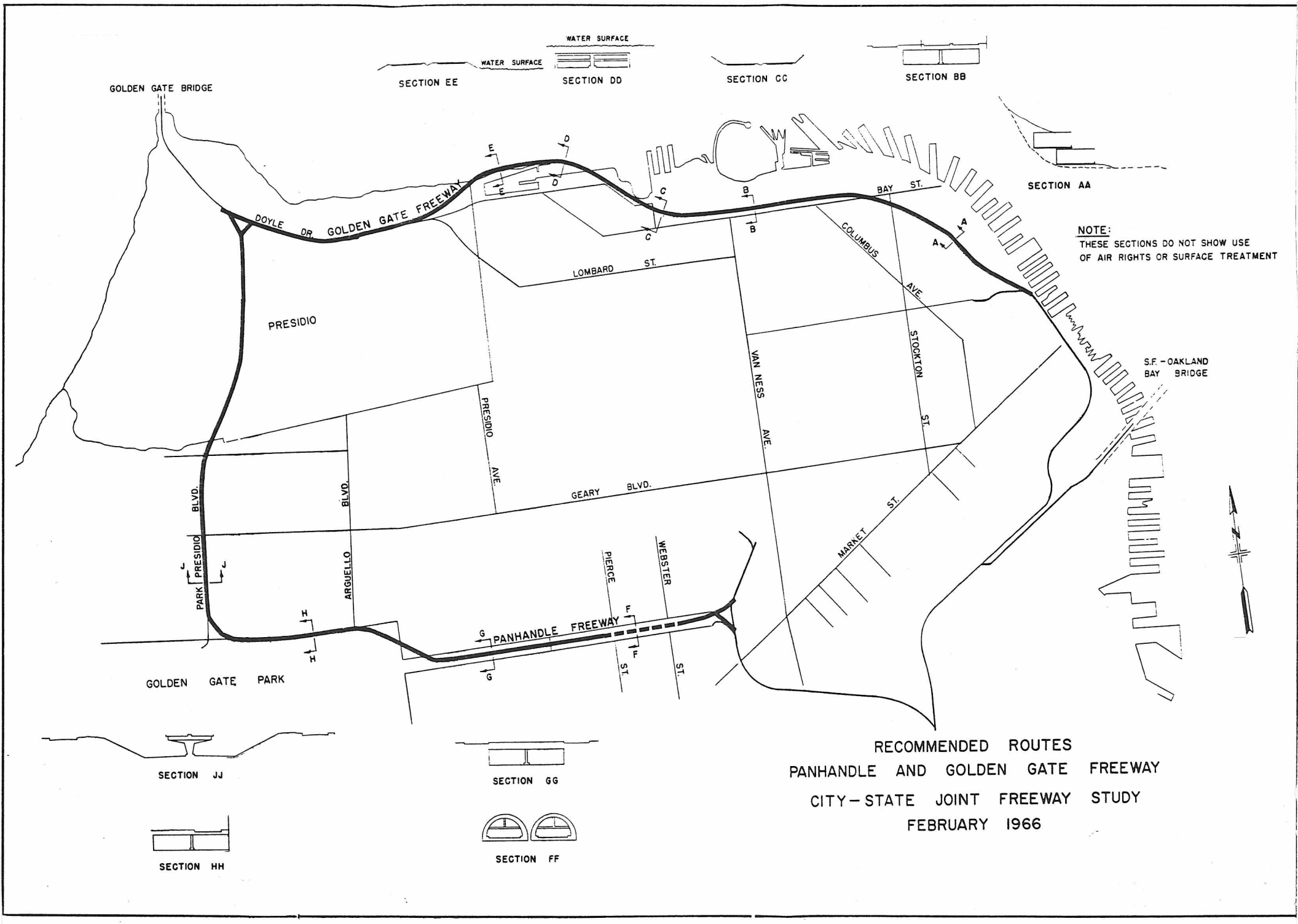
d. Use of air-rights east of Baker Street for the construction of dwelling units compatible with the surrounding area.

e. Construction of a three block bored tunnel between Steiner and Webster Streets to preserve the existing structures until such time as owners may wish to replace them.

4. The City and County of San Francisco provide sufficient funds to assist in effectuating the program described in Appendix No. 5, entitled "Housing and Replacement Study."

With the exception of new urban design features, this is perhaps the most outstanding feature of this entire study in that it recommends a program for the relocating of persons, families, and businesses displaced by construction and for the replenishment of moderate income housing in order to maintain the City tax base.

5. <u>The urban design aspects of the final design plans should be subject to review by the City and County of San Francisco before final contracts are awarded</u>. - The general recommendations of urban design submitted in this report have gone far beyond those studies formerly made for freeways in San Francisco. However, it is recognized in the short time made available for this survey that considerably more study is required. It is the feeling of the Advisory Committee that our Design Consultants have without question established the fact that freeways can be constructed in such a fashion as to enhance and improve upon the urban living conditions of San Francisco. Urban Design Consultants should be retained to participate directly and fully in the development of final plans.



RECOMMENDED ROUTES
PANHANDLE AND GOLDEN GATE FREEWAY
CITY – STATE JOINT FREEWAY STUDY
FEBRUARY 1966

APPENDIX 4

Report
to the
San Francisco City-State Joint Freeway Study
on the
Geometric Design and Traffic Studies
Associated with the Panhandle and Golden Gate Freeways

Prepared by the State Division of Highways
February 1966

To: Co-Directors:

T. J. Mellon
Chief Administrative Officer

T. J. Kent, Jr.
Coordinator of Housing,
Planning and Development

City and County of San Francisco

Date: February 14, 1966

File: 04-SF-80,280,480
04107 - 334900

From: Alan S. Hart, District Engineer
California Division of Highways, District 4

Subject: Report on State Participation in City's Restudy of the Panhandle Parkway and Golden Gate Freeway

Introduction

This report covers participation by the California Division of Highways in the City's restudy of the Panhandle Parkway and Golden Gate Freeway as requested by San Francisco Board of Supervisors' Resolution Number 795-65, adopted December 13, 1965. Detailed discussion and comments are limited to studies performed under City-State Agreement executed December 29, 1965. Reference is made to earlier studies as presented in State Technical Reports on the Panhandle Parkway and Golden Gate Freeway dated March 1964 and March 1965, respectively.

Contents

This report contains the technical data prepared by the State during the joint study. Certain assumptions are based on findings of the various City departments and consultants. The evaluation charts contain basic cost and right-of-way information and the several exhibit maps illustrate the new proposals. Updated cost estimates for the State Highway Engineer's recommended locations

are included for each corridor to facilitate review and evaluation of new proposals.

No attempt is made to include detailed breakdown of right of way by type of improvement. The housing consultant will cover this in his report. The housing consultant and the architectural consultants will also present their findings for joint use possibilities at several locations.

A brief outline of the earlier planning studies in these corridors is included for historical reference.

History

In 1962 the San Francisco Board of Supervisors passed a resolution requesting a study of the Panhandle-Park-Presidio Corridor. The study was started in late 1962 and most of the data were compiled in 1963. The results of this study were presented to the Board of Supervisors early in 1964. Several public map displays and a public hearing followed the initial presentation to the Board.

The opposition centered around the idea that the freeway would ruin the park and, therefore, freeway construction should not be permitted in park areas. In line with public opinion, the State Highway Engineer recommended the E-1,K,L-3 combination of alternatives as best minimizing disruption to park areas while providing the necessary traffic service.

Alternative E-1 was an open depressed freeway located just south of the Panhandle Park. It avoided most of the Panhandle but required the half block of buildings facing the Panhandle. Alternative K for Golden Gate Park used the space under existing streets for most of its length. Inbound traffic was placed in a tunnel under Main Drive. Outbound traffic was placed in a tunnel under the northeast corner of the park and in an open section under Fulton Street west of Arguello Boulevard. The L-3 design along Park-Presidio Boulevard retained local traffic in its present location but on structure over a depressed freeway. No elevated viaduct was necessary.

The Board of Supervisors rejected the State Highway Engineer's recommendation in May of 1964, but agreed to a study of Alternative F, with modifications, as proposed by the City Planning Commission.

During this restudy, the Recreation and Park Commission reviewed the modification of Plan F but stated they preferred tunnels in park land. Alternative G-2, a tunnel in the Panhandle, and Alternative H-2, a tunnel under Fulton Street and the northern edge of Golden Gate Park, were developed by the State and were approved by the Recreation and Park Commission. The City Planning Commission and the City Department of Public Works concurred.

The opposition to freeway construction by this time had added to its objections. The relocation of people, the loss of low-cost housing, and the disruption to the community became major issues in addition to park land.

The Board rejected the compromise alternatives by a 6 to 5 vote on October 13, 1964. The California Highway Commission did not adopt a route in the face of this opposition by the Board, and the project was declared inactive pending a change in City policy.

Meanwhile, in response to another resolution passed by the San Francisco Board of Supervisors, studies for location of Route 480, the Golden Gate Freeway, were begun early in 1964. The studies were completed early in 1965 and formally presented to the Board March 8, 1965.

Public map displays were held later in March and a public hearing was held April 9, 1965. Information gathered at this hearing formed the basis for the State Highway Engineer's recommendation that Plan F,F-5 be adopted by the California Highway Commission as the location for Route 480. This alternative skirts the easterly and northerly faces of Telegraph Hill, then lies between Bay and North Point Streets until it reaches Fort Mason. It crosses the southwest corner of the new Gashouse Cove Yacht Harbor, veers westerly outside the Marina Green, and connects to the Golden Gate Bridge approach with a below-ground-level interchange.

The joint Transportation and Planning and Development Committee of the Board held several public hearings on the project. This resulted in passage of Board Resolution No. 475-65, which rejected the State plan and recommended a plan submitted by the

San Francisco Chamber of Commerce. The Chamber plan utilizes three tubes passing under Bay, North Point and Beach Streets, which join together in Fort Mason, pass under Marina Boulevard and join with the approaches to the Golden Gate Bridge in the Presidio.

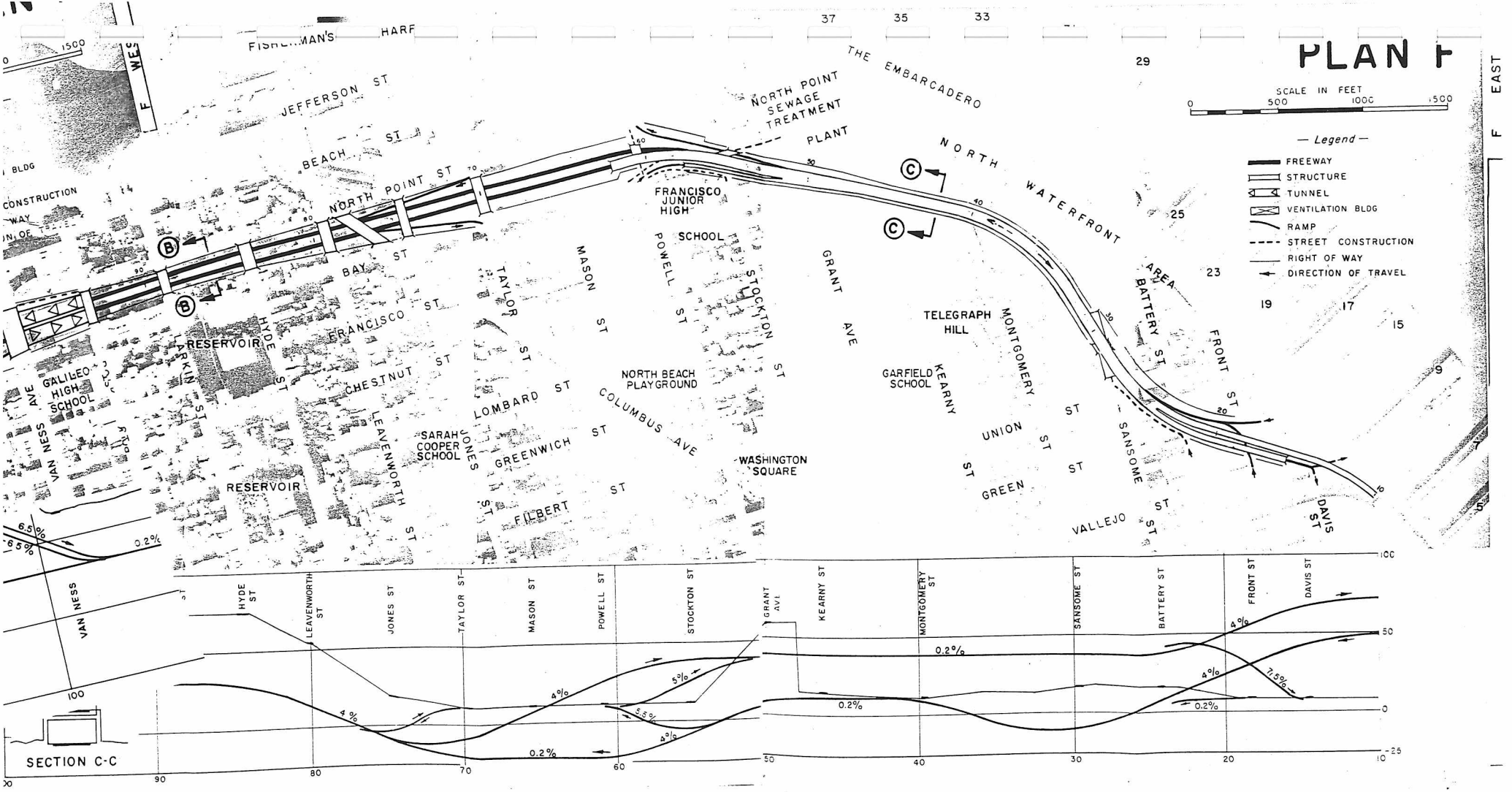
The current restudy is an extension of earlier planning by putting all proposals under the careful scrutiny of the City, the State, and several teams of consultants in an effort to overcome objections to freeways in these corridors.

TRAFFIC PROJECTIONS

The traffic data presented in this restudy represents a restudy of previous projections for the Golden Gate and Park-Presidio-Panhandle Freeways. Primarily, it is based on planning data supplied by the San Francisco City Planning Department concerning future development of the City and information received from other agencies. Factors considered in the projections were: future land use, population and employment growth, the growth of automobile ownership and usage, and public transit patronage.

This traffic review has been done with the advice and full cooperation of the City's Traffic Division.

Traffic projections have been developed for 27 different combinations of freeway plans. These combinations are made up of either or both of the two proposed freeways, with various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RAMP
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NORTH WATERFRONT AREA
NORTH POINT SEWAGE TREATMENT PLANT
FRANCISCO JUNIOR HIGH SCHOOL
NORTH POINT ST
BEACH ST
JEFFERSON ST
BAY ST
FRANCISCO ST
CHESTNUT ST
LOMBARD ST
GREENWICH ST
FILBERT ST
RESERVOIR
GALILEO HIGH SCHOOL
VAN NESS AVE
LEAVENWORTH ST
JONES ST
TAYLOR ST
MASON ST
POWELL ST
STOCKTON ST
COLUMBUS AVE
NORTH BEACH PLAYGROUND
SARAH COOPER SCHOOL
WASHINGTON SQUARE
GRANT AVE
TELEGRAPH HILL
GARFIELD SCHOOL
KEARNY
MONTGOMERY ST
SANSOME ST
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UNION ST
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VALLEJO ST
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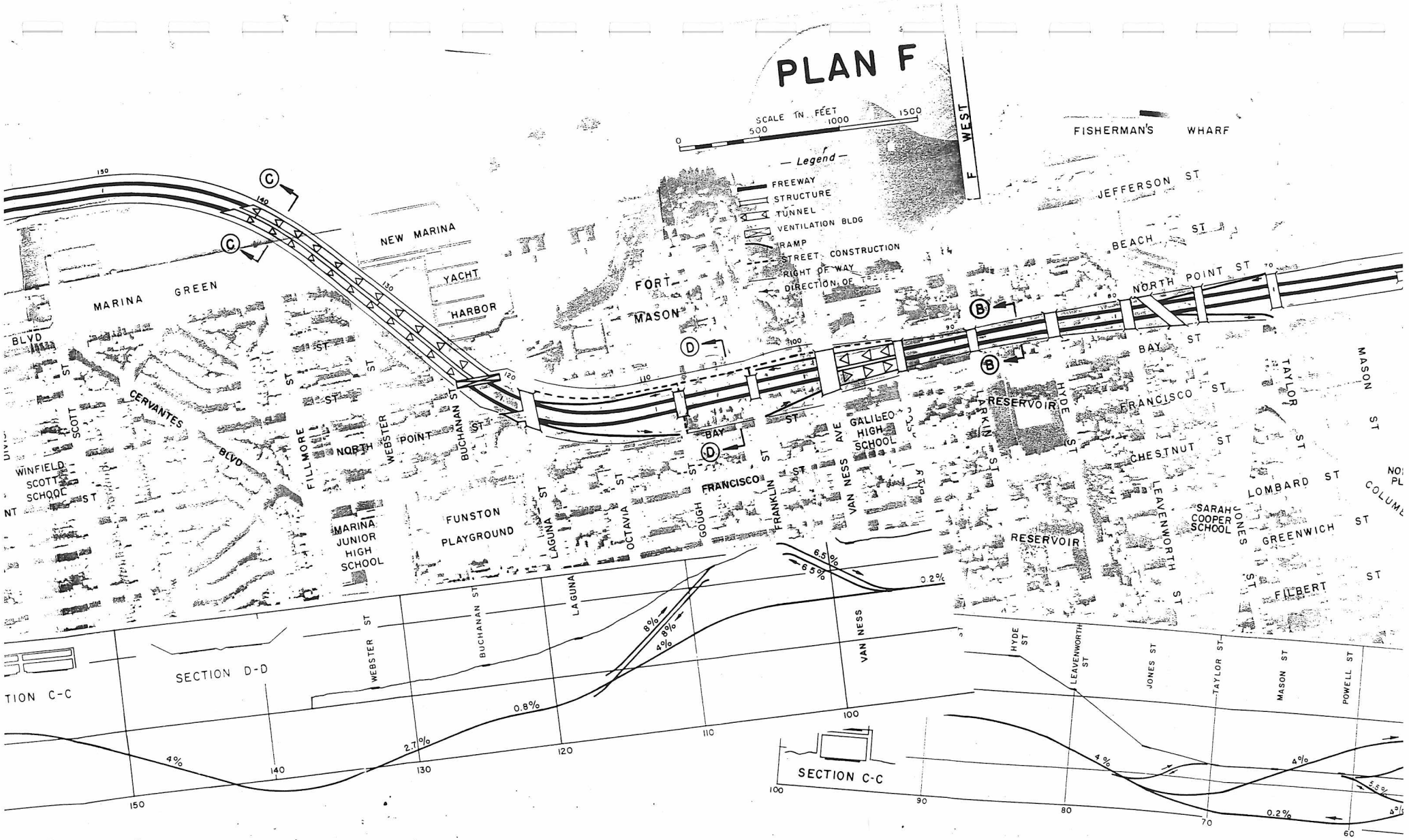
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JEFFERSON ST
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NORTH POINT ST
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FRANCISCO ST
CHESTNUT ST
LOMBARD ST
GREENWICH ST
FILBERT ST
NEW MARINA
YACHT HARBOR
MARINA GREEN
BLVD
FORT MASON
CERVANTES BLVD
WINFIELD SCOTT SCHOOL
FILLMORE ST
WEBSTER ST
BUCHANAN ST
LAGUNA ST
OCTAVIA ST
GOUGH ST
FRANKLIN ST
VAN NESS AVE
GALILEO HIGH SCHOOL
MARINA JUNIOR HIGH SCHOOL
FUNSTON PLAYGROUND
RESERVOIR
HYDE ST
LEAVENWORTH ST
JONES ST
TAYLOR ST
MASON ST
POWELL ST
SARAH COOPER JONES SCHOOL
SECTION D-D
SECTION C-C
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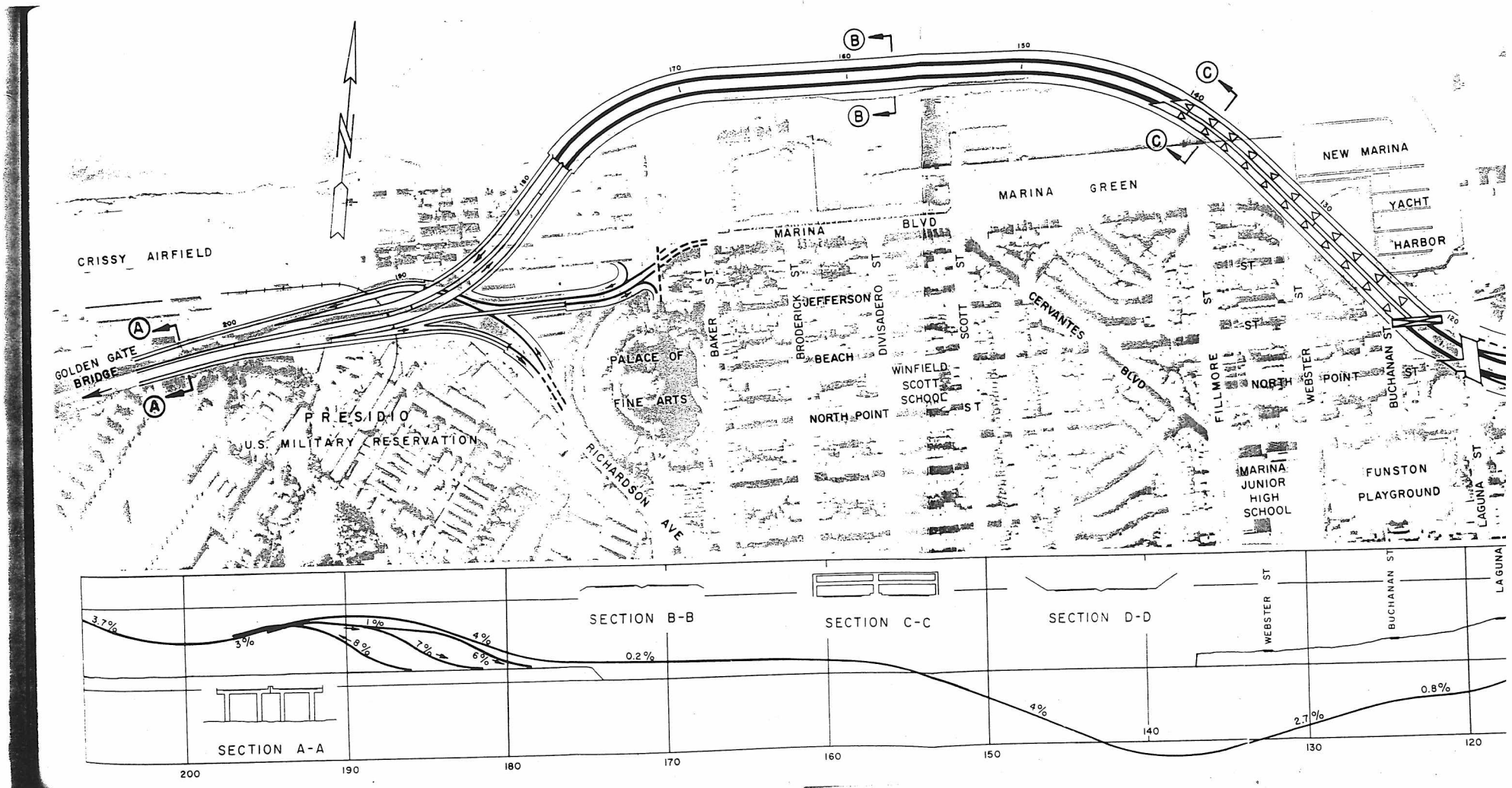
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GOLDEN GATE BRIDGE
PRESIDIO
U.S. MILITARY RESERVATION
PALACE OF FINE ARTS
RICHARDSON AVE
BAKER ST
BRODERICK ST
JEFFERSON ST
DIVISADERO ST
SCOTT ST
CERVANTES BLVD
MARINA BLVD
BEACH
NORTH POINT
WINFIELD SCOTT SCHOOL
MARINA GREEN
NEW MARINA
YACHT HARBOR
FILLMORE ST
WEBSTER ST
BUCHANAN ST
LAGUNA ST
NORTH POINT
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FUNSTON PLAYGROUND
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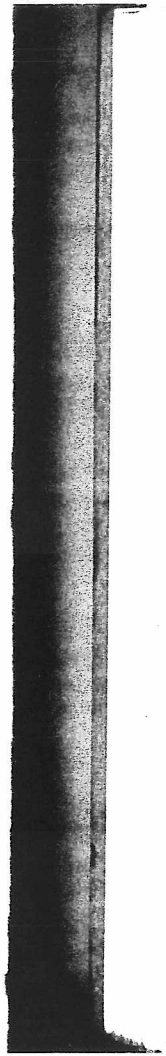

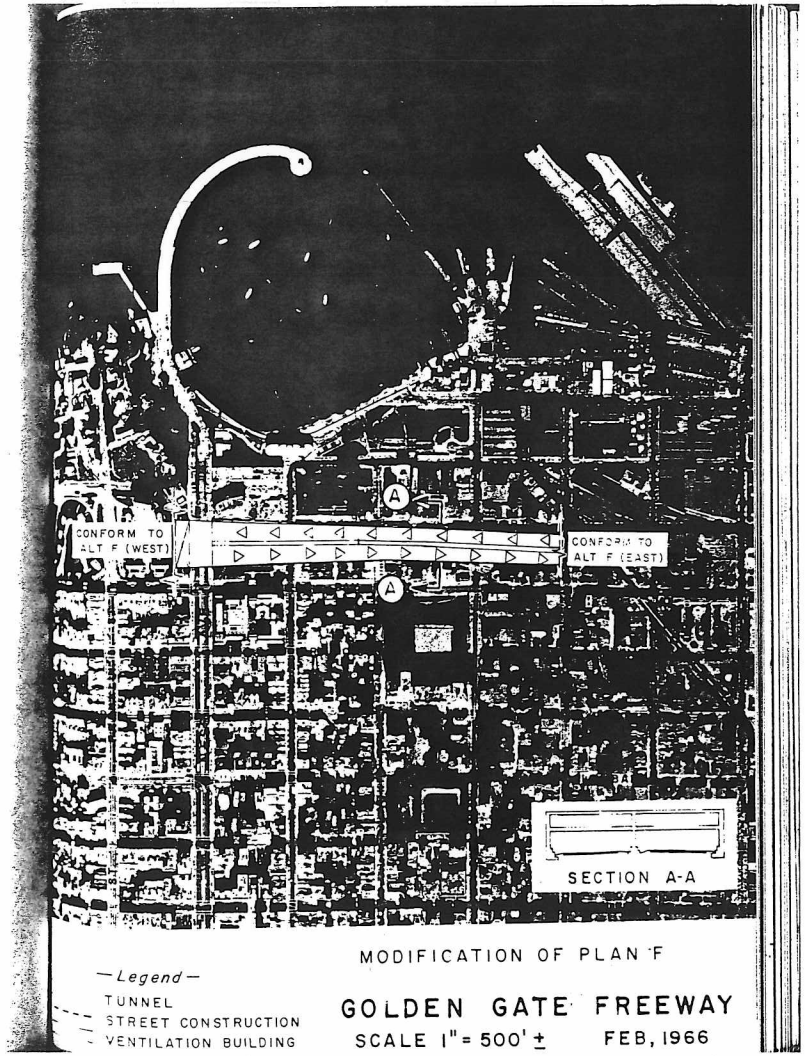

MODIFICATION OF PLAN F

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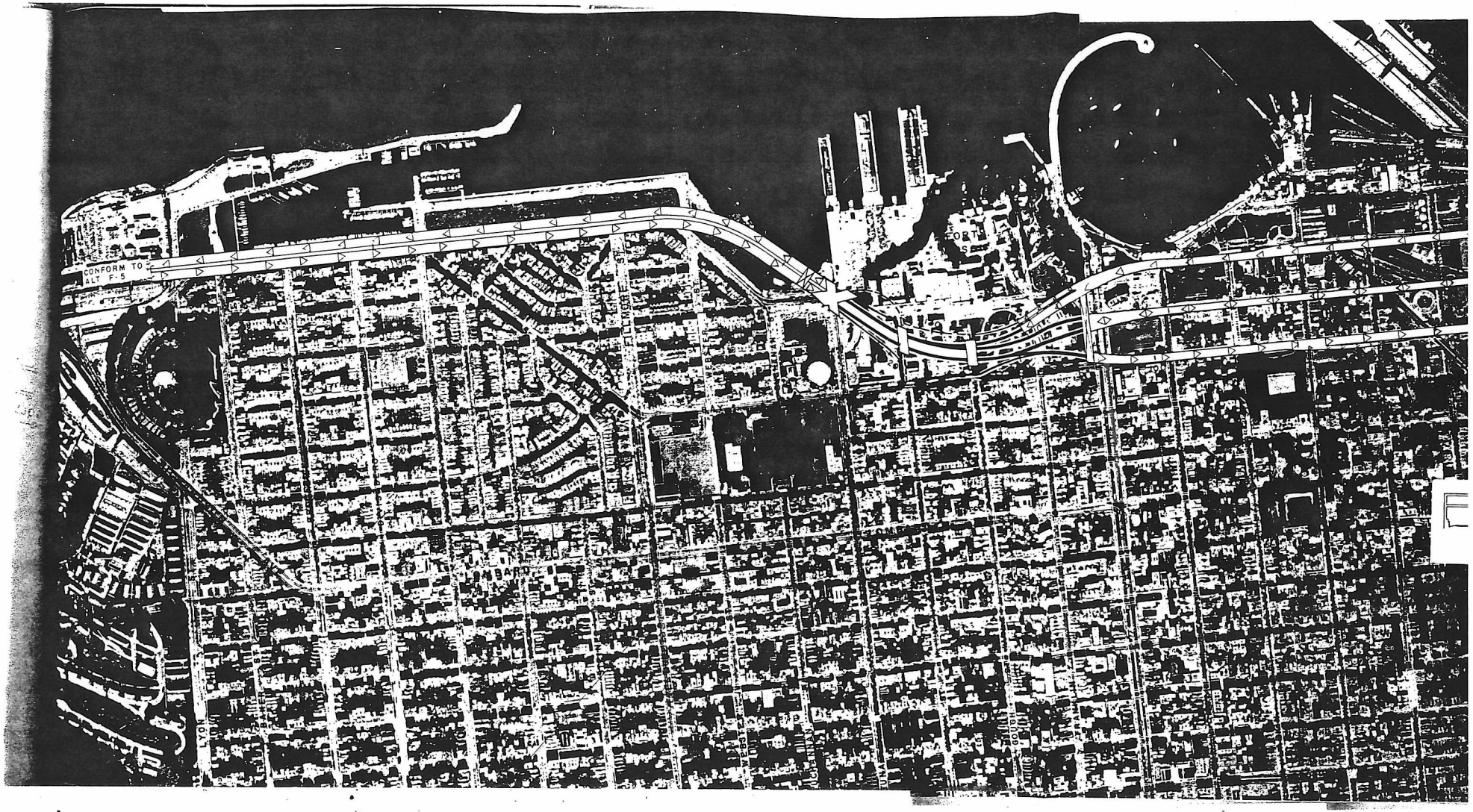
POW F



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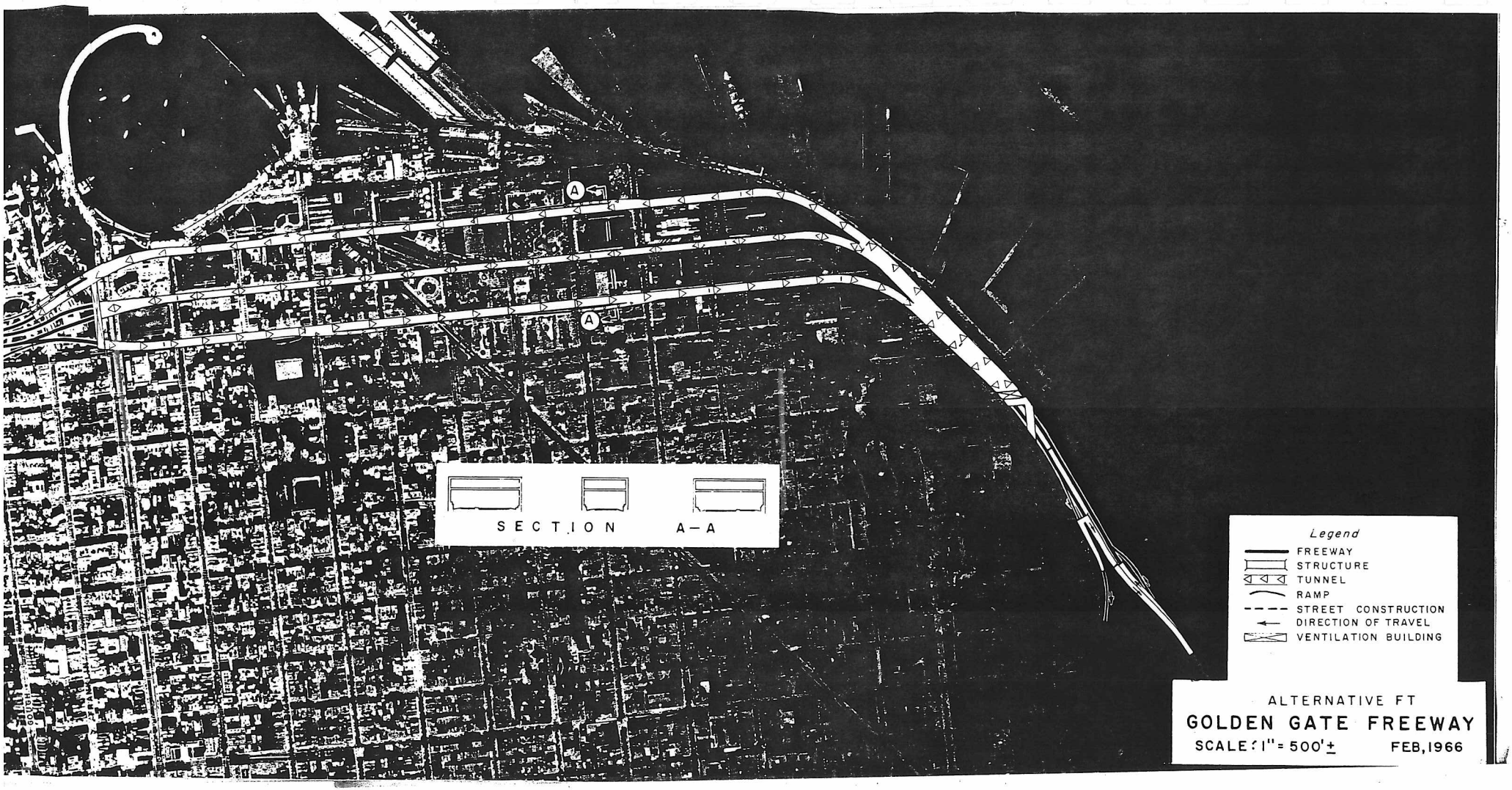
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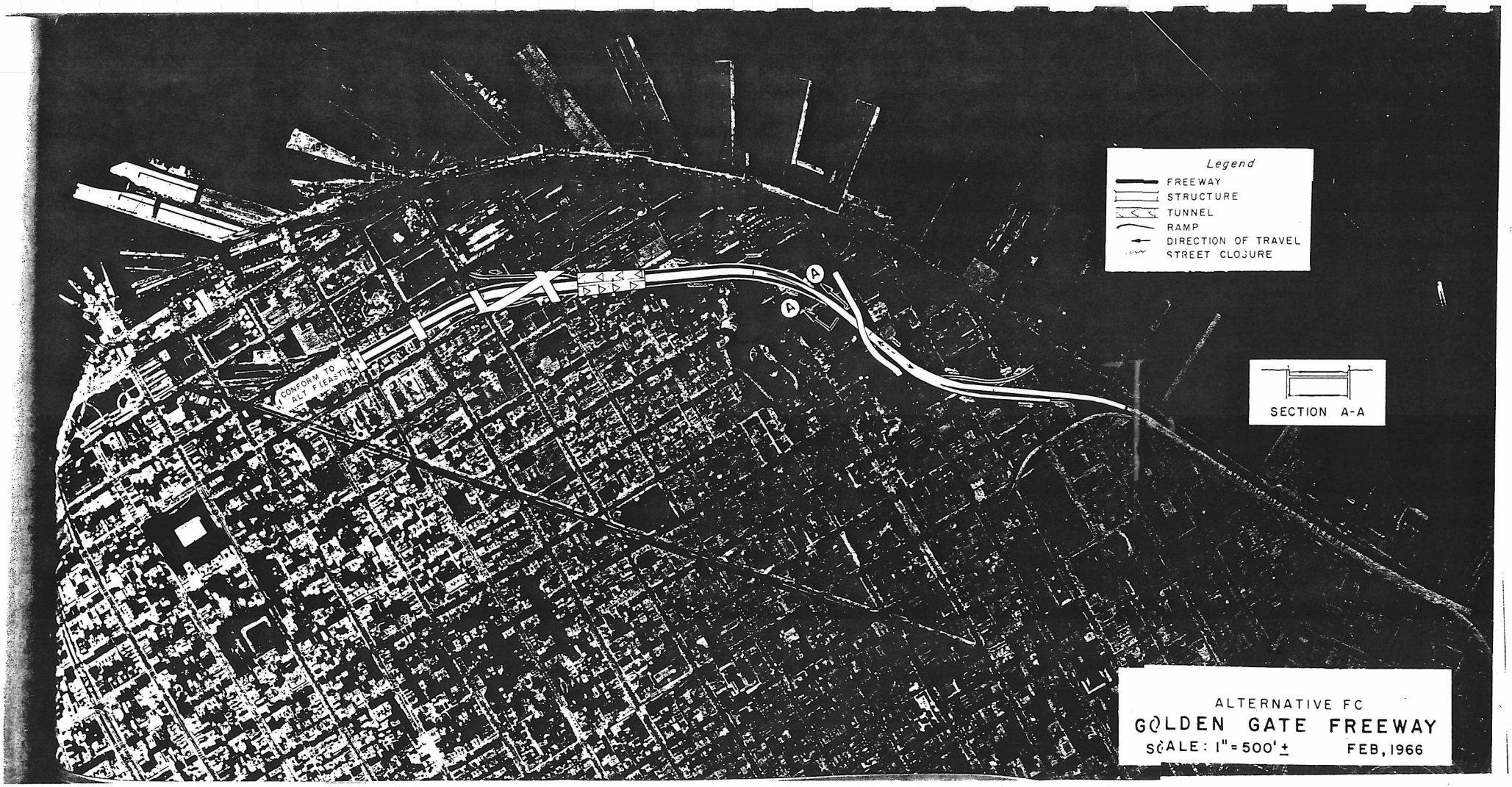
STRUCTURE
TUNNEL
RAMP
STREET CONSTRUCTION
DIRECTION OF TRAVEL
VENTILATION BUILDING
ALTERNATIVE FT
GOLDEN GATE FREEWAY
SCALE: 1" = 500' ±
FEB, 1966

7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GOLDEN GATE FREEWAY
SCALE: 1" = 500' ±
FEB, 1966

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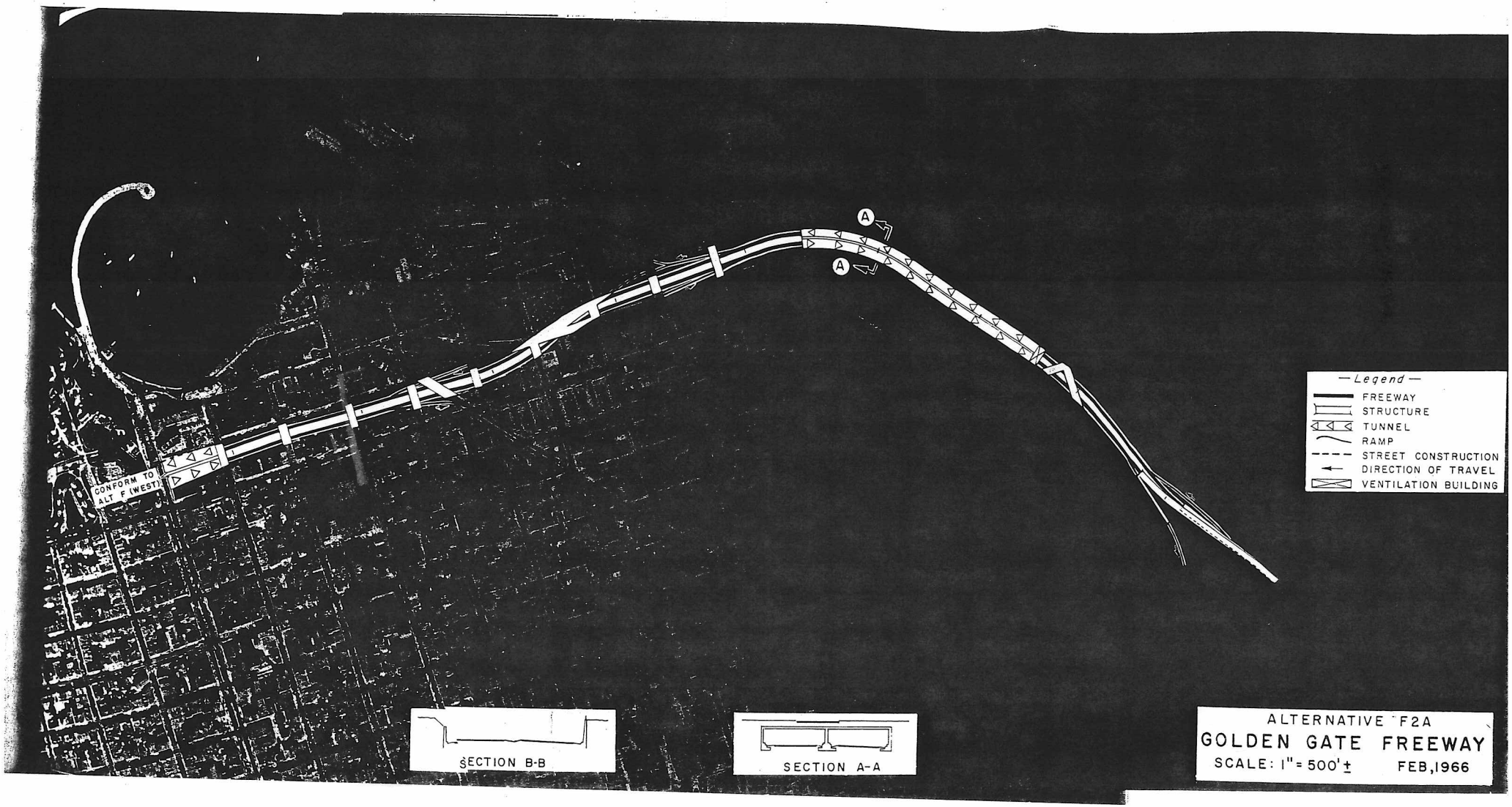
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SECTION B-B
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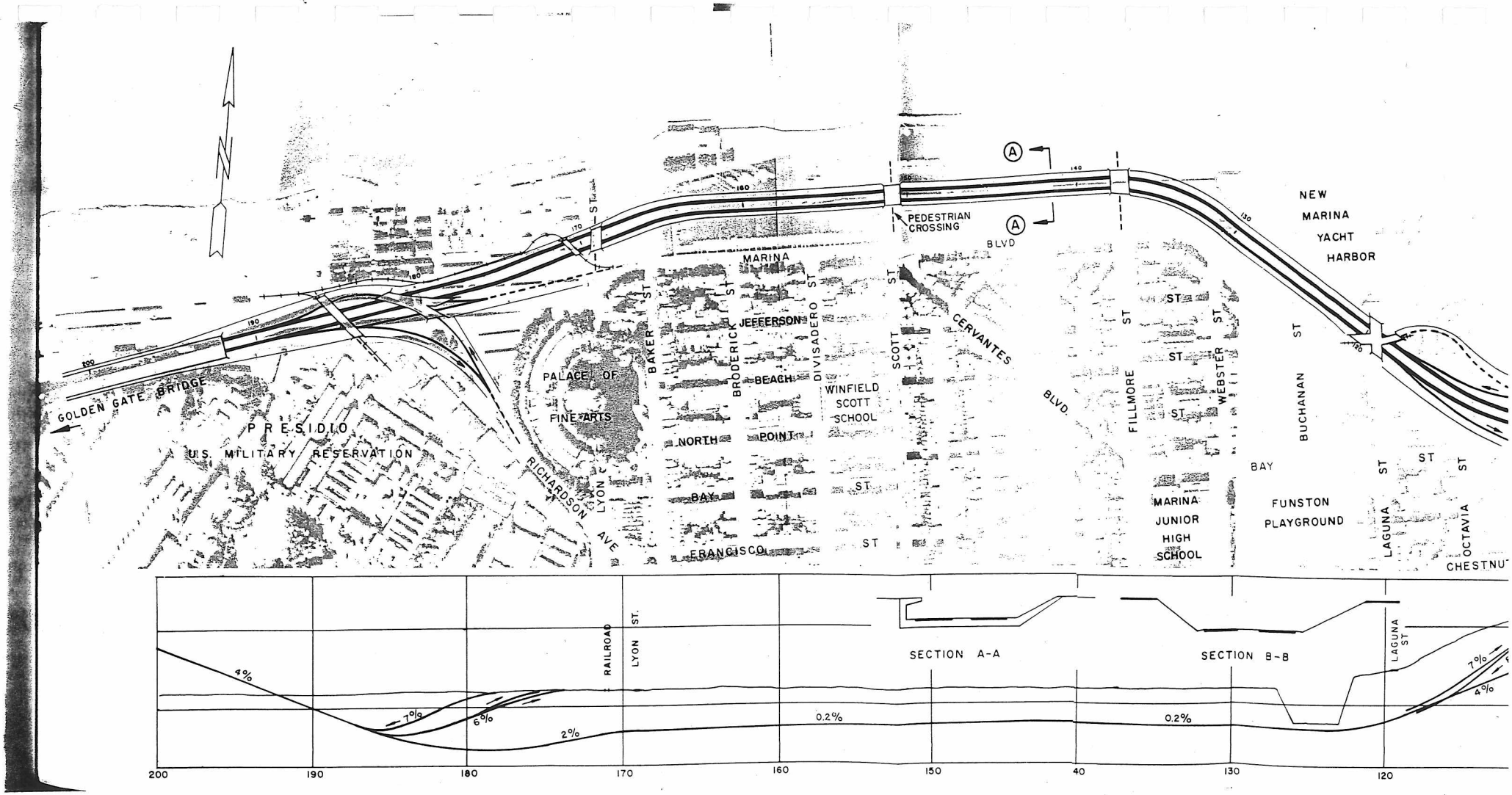
ALTERNATIVE F2A
GOLDEN GATE FREEWAY
SCALE: 1" = 500' ±
FEB, 1966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U.S. MILITARY RESERVATION
PALACE OF FINE ARTS
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BRODERICK ST
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MARINA
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BEACH
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FRANCISCO
WINFIELD SCOTT SCHOOL
RICHARDSON AVE
LYON ST
PEDESTRIAN CROSSING
BLVD
CERVANTES
FILLMORE
WEBSTER
BUCHANAN
NEW MARINA YACHT HARBOR
MARINA JUNIOR HIGH SCHOOL
FUNSTON PLAYGROUND
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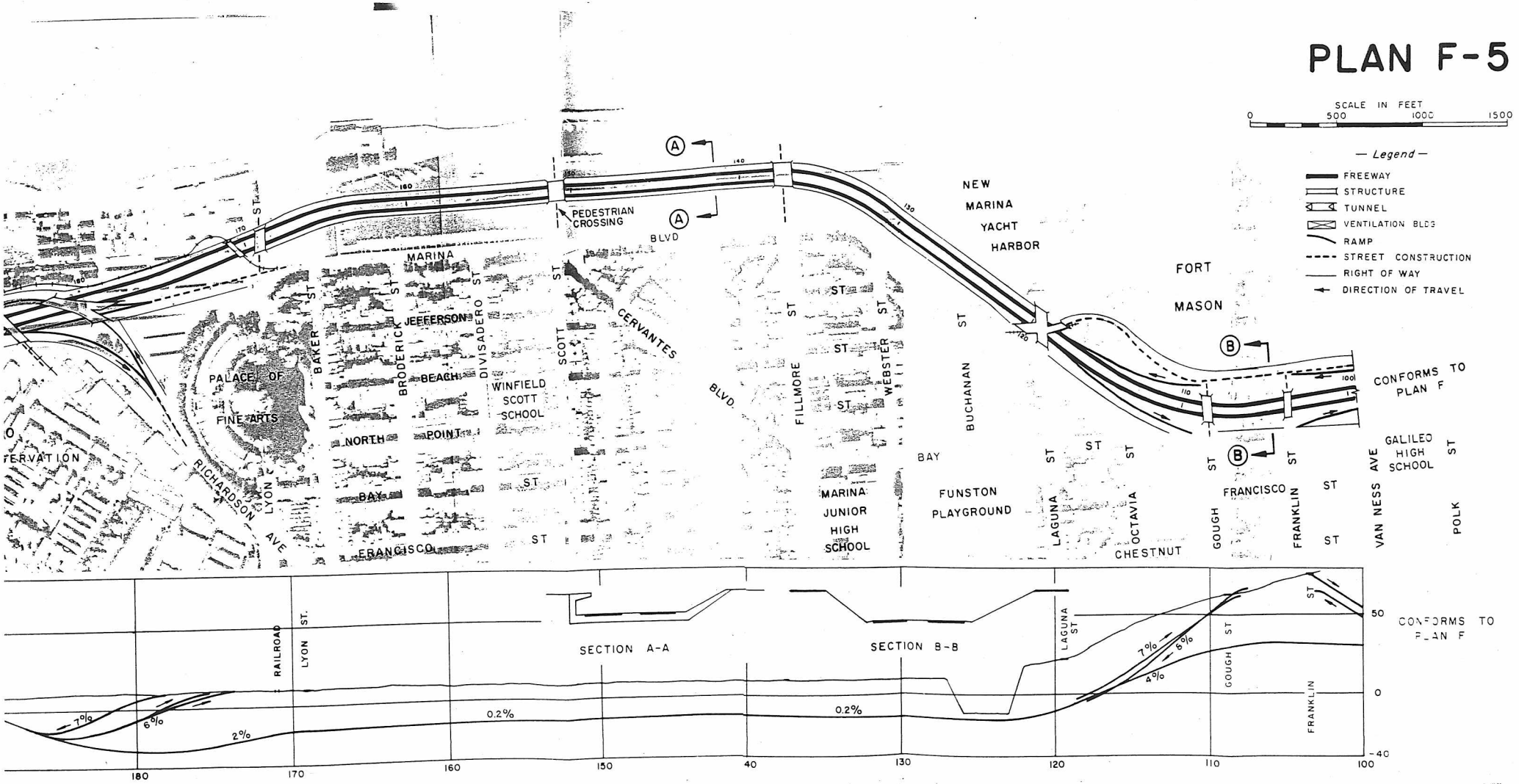
PLAN F-5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JEFFERSON
BEACH
NORTH
POINT
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FRANCISCO
WINFIELD SCOTT SCHOOL
PALACE OF FINE ARTS
CERVANTES BLVD.
NEW MARINA YACHT HARBOR
FORT MASON
FILLMORE
WEBSTER
BUCHANAN
FUNSTON PLAYGROUND
MARINA JUNIOR HIGH SCHOOL
LAGUNA
OCTAVIA
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GOUGH
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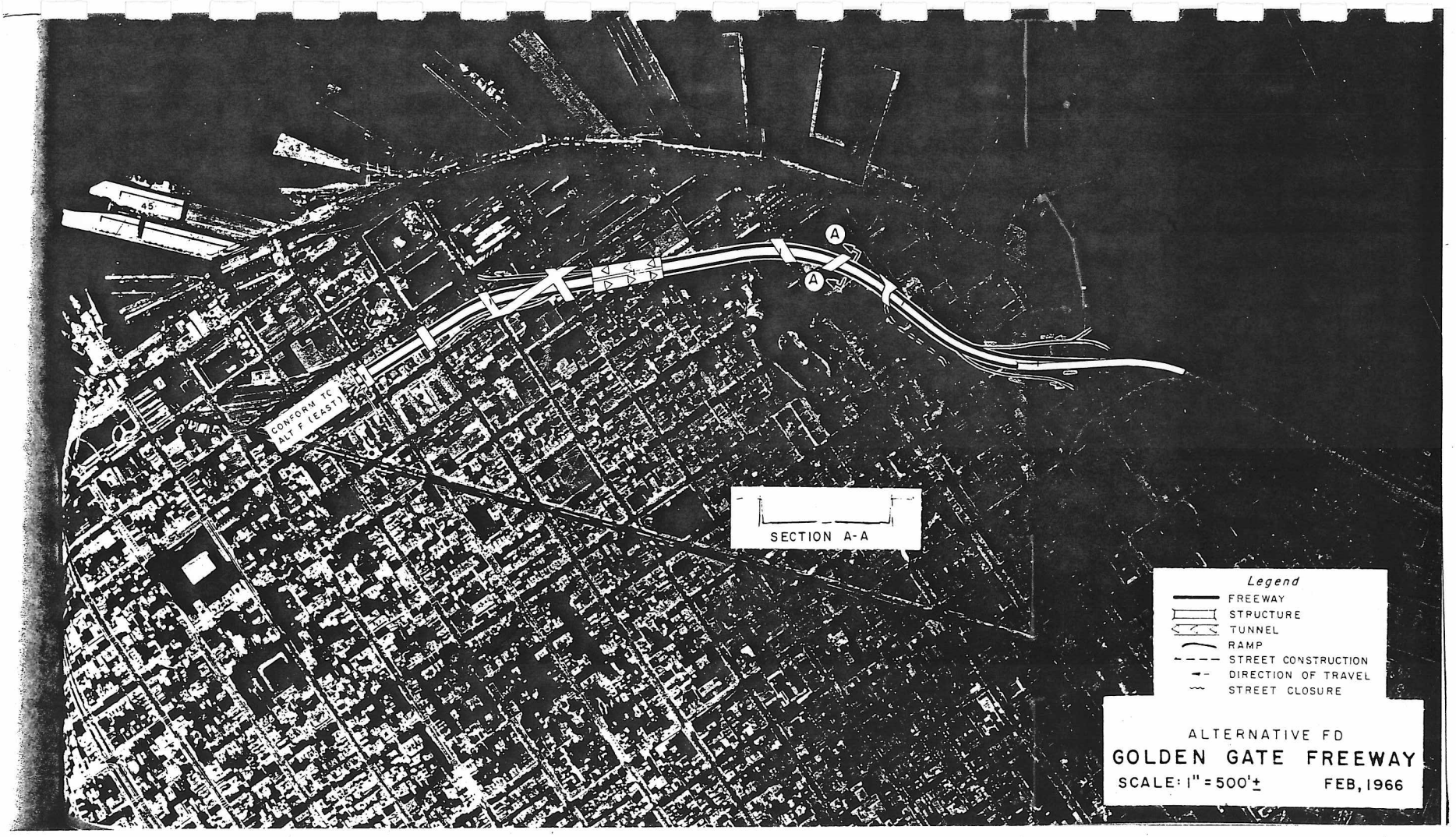
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TUNNEL
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STREET CLOSURE
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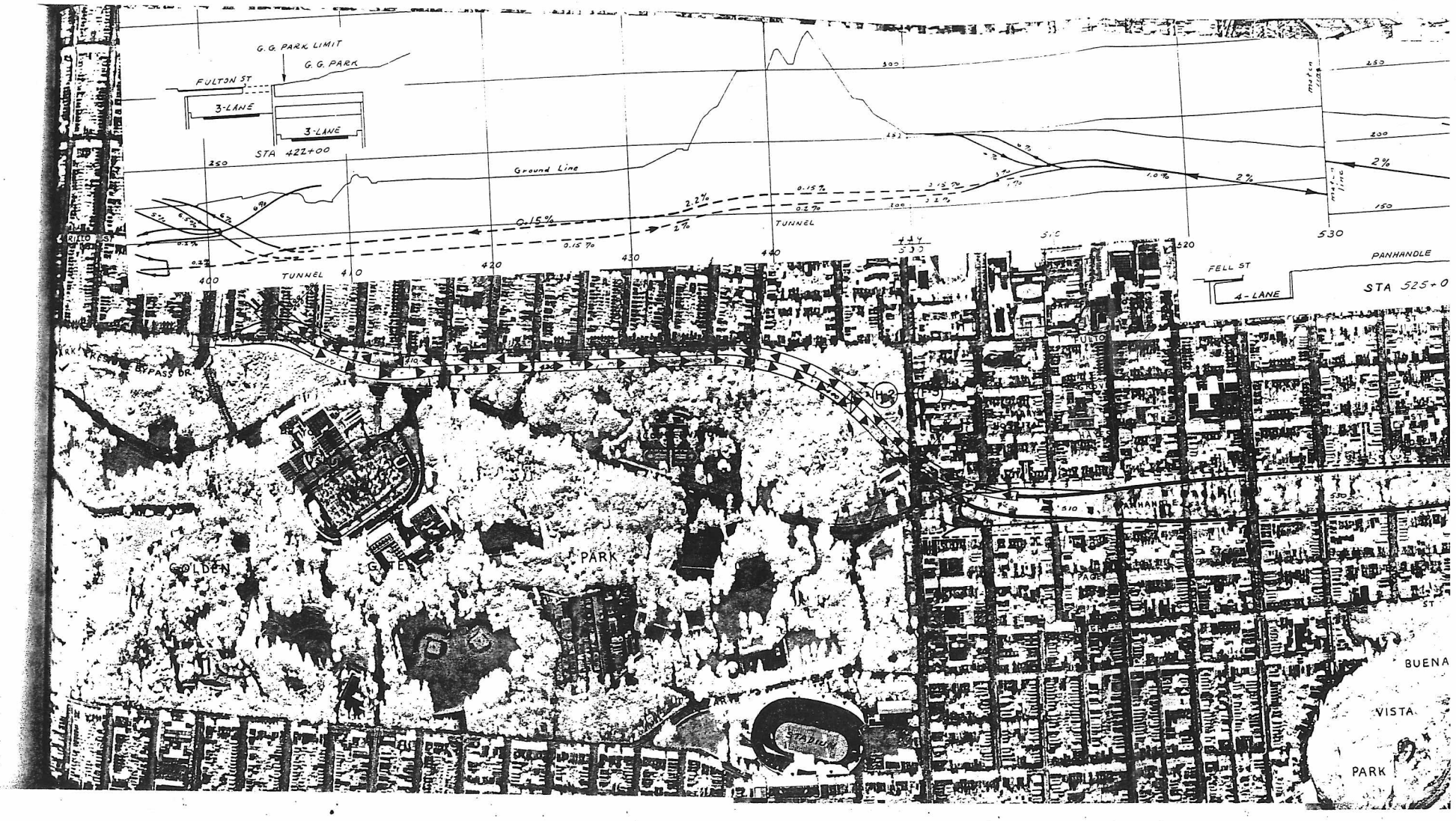
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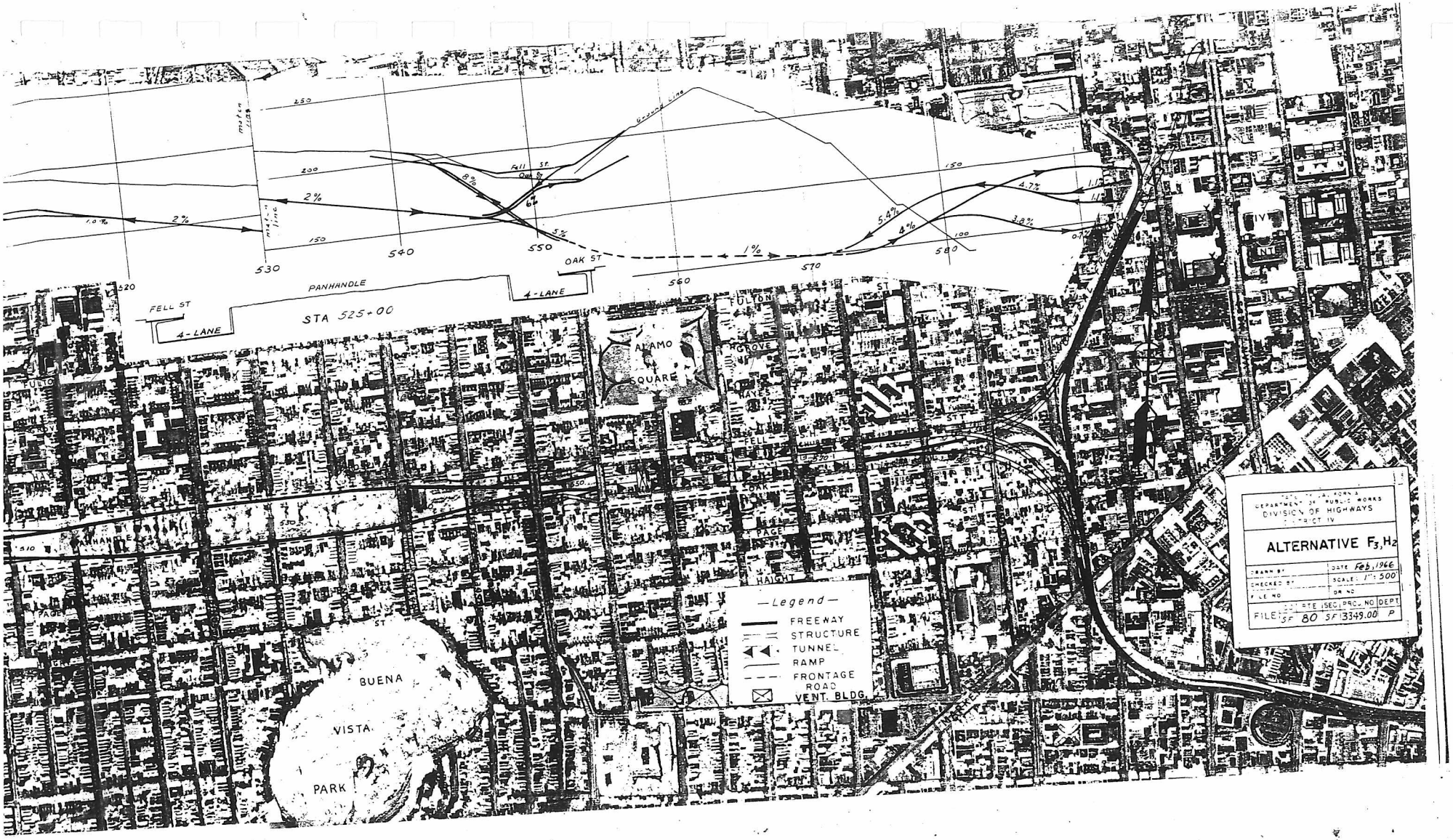
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FREEWAY
STRUCTURE
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DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
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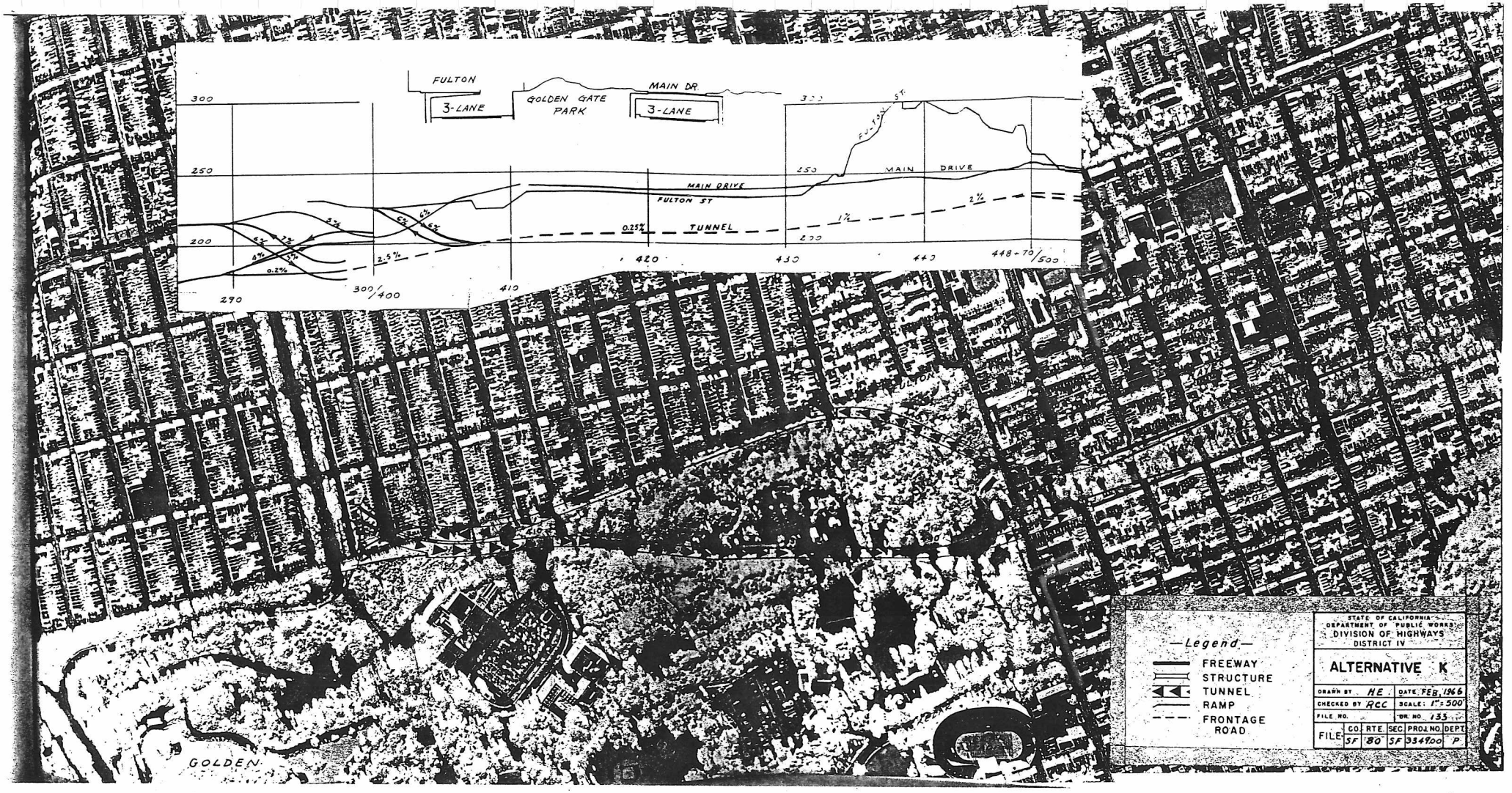
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STATE OF CALIFORNIA
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DIVISION OF HIGHWAYS
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BUENA VISTA PARK
STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
DISTRICT 04
ALTERNATIVE G-2, J-2
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DATE FEB, 1966
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